



# VALIDATION REPORT

**CARBON RESOURCE  
MANAGEMENT LTD.**

**VALIDATION OF THE  
INNER MONGOLIA WULIJI  
WIND FARM PROJECT**

**BUREAU VERITAS CERTIFICATION**

**REPORT No. BVC/CHINA-VAL/0061/2008**

**REVISION No. 02**

# VALIDATION REPORT

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Client:	Client ref.:
Carbon Resource Management Ltd.	Ms. Qian Yiwen

## Summary:

Bureau Veritas Certification has made the validation of Inner Mongolia Wuliji Wind Farm Project of Carbon Resource Management Ltd. located in Wulate Hou Qi, Bayannao'er City, Inner Mongolia Autonomous Region, P. R. China on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the validation process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology ACM0002 version 09 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

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Work carried out by:				<input checked="" type="checkbox"/> No distribution without permission from the Client or responsible organizational unit
Liao Ling (Team Leader) Zeng Ziyuan (Team Member)				
Work verified by:				<input type="checkbox"/> Limited distribution
Robin Wang (Internal Reviewer) Mr. H B Muralidhar(Internal Reviewer)				
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## Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CCPG	Central China Power Grid
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CH <sub>4</sub>	Methane
CL	Clarification Request
CO <sub>2</sub>	Carbon Dioxide
DIS	Draft of International Standard
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ERPA	Emission Reduction Purchase Agreement
FSR	Feasibility Study Report
GHG	Green House Gas(es)
GSP	Global Stakeholders Process
GWP	Global Warming Potential
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
ISCH	International Stakeholder Consultation
ISO	International Organization for Standardization
LOA	Letter of Approval
MoV	Means of Verification
MP	Monitoring Plan
NCPG	North China Power Grid
NDRC	National Development Reform Commission
NEPG	Northeast China Power Grid
NGO	Non Government Organization
ODA	Official Development Assistance
PDD	Project Design Document
PP	Project Proponent (project owner)
PPA	Power Purchase Agreement
SWPC	Statistics of wind power installed capacity in China
UNFCCC	United Nations Framework Convention for Climate Change
VVM	Validation & Verification Manual
WTG	Wind Power Generator

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## 1 INTRODUCTION

Carbon Resource Management Ltd. has commissioned Bureau Veritas Certification to validate its CDM project Inner Mongolia Wuliji Wind Farm Project (hereafter called “**the Project**”) of CGN Wind Power Co., Ltd. (the project owner, hereafter called “**the PP**”) at Wulate Hou Qi, Bayannao’er City, Inner Mongolia Autonomous Region, P.R.China.

This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

### 1.1 Objective

The validation serves as project design verification and is a requirement of all projects. The validation is an independent third party assessment of the project design. In particular, the project’s baseline, the monitoring plan (MP), and the project’s compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

### 1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

### 1.3 Validation team

The validation team consists of the following personnel:

Liao Ling                Team Leader,,  
Bureau Veritas Certification, Climate Change Verifier

Zeng Ziyuan            Team Member,  
Bureau Veritas Certification, Climate Change Verifier

## 2 METHODOLOGY

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the project, according to the version 01 of the Clean Development Mechanism Validation and Verification Manual issued by the Executive Board at its 44 meeting on 28/11/2008./2/ The protocol



shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- ↳ It organizes, details and clarifies the requirements a CDM project is expected to meet;
- ↳ It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of five tables. The different columns in these tables are described in below **Figure 1**. The completed validation protocol is enclosed in Appendix A to this report.

Validation Protocol Table 1: Requirements checklist				
Checklist Question	Reference	Means of verification(MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further subdivided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a <b>Corrective Action Request (CAR)</b> due to non-compliance with the checklist question. (See below). <b>Clarification Request (CL)</b> is used when the validation team has identified a need for further clarification.

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	Ref. to checklist question in tables 1	Summary of project owner response	Validation conclusion
If the conclusions from the Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 1 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the validation team should be summarized in this section.	This section should summarize the validation team's responses and final conclusions. The conclusions should also be included in Tables 1 under "Final Conclusion".

**Figure 1.** Validation Protocol Tables

## 2.1 Review of Documents

The Project Design Document (PDD) submitted by Carbon Resource Management Ltd. (the CDM consultant, hereafter called "**CRM**") and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project



Design Document (CDM-PDD), Approved methodology, Kyoto Protocol, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests CRM revised the PDD and resubmitted it on 26/03/2009 and the validation findings presented in the report Version 01 relate to the Project as described in the PDD version 2. /Ref.02/ After review requests raised by CDM EB, PP revised the PDD to version 2.1 dated 22/02/2010 and this validation report was updated based on the PDD version 2.1. /Ref.32/

## 2.2 Follow-up Interviews

On 05/12/2008 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of the PP, the consultant and local stakeholders were interviewed (see Section **6-References**). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview Topics**

Interviewed organization	Interview topics
CGN Wind Power Co., Ltd. (The PP)	<ul style="list-style-type: none"> <li>↗ Project background information and CDM consideration.</li> <li>↗ Project technology, operation, maintenance and monitoring capability.</li> <li>↗ Project monitoring and management plan.</li> <li>↗ Stakeholder consultation process.</li> <li>↗ Project approval status (incl. EIA approval, CDM project approval status)</li> <li>↗ Wind power development in the area</li> <li>↗ Government policies related to wind power projects</li> </ul>
Local Stakeholder	<ul style="list-style-type: none"> <li>↗ Identify the topics for interview</li> <li>↗ Project background in details</li> <li>↗ Stakeholder comments</li> <li>↗ Social and environmental impact of the project</li> </ul>
Carbon Resource Management Ltd. (The Consultant)	<ul style="list-style-type: none"> <li>↗ Applicability of selected methodology.</li> <li>↗ Baseline determination.</li> <li>↗ Emission reductions calculation.</li> <li>↗ Emission reduction monitoring plan.</li> </ul>

## 2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

Corrective Action Requests (CAR) is issued, where:

- (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;



- (b) The CDM requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.

The validation team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

To guarantee the transparency of the validation process, the concerns raised are documented in more detail in the validation protocol in the Appendix A.

### 3 VALIDATION CONCLUSIONS

In the following sections, the findings of the validation are stated.


The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Validation Protocol Appendix A.


The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in **4** Corrective Action Requests and **9** Clarification Requests.

The number between brackets at the end of each section corresponds to the VVM paragraph.

#### 3.1 Approval


The letter of approval has been received and the following support documentation:

 The China's DNA has issued the Letter of Approval in November 2008, authorizing CGN Wind Power Co., Ltd. as the Project Participant and confirmed that the Inner Mongolia Wuliji Wind Farm Project contributes to China's Sustainable development. /Ref.03/

 The DNA of United Kingdom of Great Britain and Northern Ireland has issued a Letter of Approval dated 24/02/2009, authorizing Carbon Resource Management Ltd. as the Project Participants for the Project. /Ref.04/

Bureau Veritas Certification received the above letters from the PP and does not doubt its authenticity by checking the relevant official information.

The letters of approval do not contain a specific version of both the PDD and the validation report.

 Complying with para.49,50 and 125/VVM, Bureau Veritas Certification recognizes that Inner Mongolia Wuliji Wind Farm Project of CGN Wind Power Co., Ltd. is helping country fulfill its goals of promoting sustainable development. The Project is expected to be in line with host-country specific CDM requirements because it-

- (a) reducing GHG emissions in China compared to the business-as-usual scenario;
- (b) helping to stimulate the growth of wind power industry in China;
- (c) creating local employment opportunities during the construction and operation of the Project;
- (d) increasing the revenue for local government.





There is also evident in various approvals or regulations issued by the government in China. There are as below,

✍ The project activity of Grid connected wind power and the development of such Grid connected wind power is listed in the Renewable Energy Law, in the 2005 Guiding Catalogue of Industrial Structure Regulation Issued by National Development and Reform Commission. /Ref.05 and 23/

✍ Environment Impact Assessment (EIA) approved by Environmental Protection Bureau of Inner Mongolia in May 2008 (Doc. No. Nei Huan Shen (Biao) [2008] no.95). /Ref.16/

✍ Feasibility Study Report (FSR) of the Project approved by Development and Reform Commission of Inner Mongolia Autonomous Region approved in 23/07/2008 (Doc. No. Nei Fa Gai Neng Yuan Zi [2008] no.1411). /Ref.10/

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Certified Emissions Reductions (CERs) under the CDM, based on the investment analysis and prevailing practice, addressed in the PDD.

The overall layout of the Project is sound and the geographical (Wulate Hou Qi, Bayannao'er City, Inner Mongolia Autonomous Region, P.R.China) and temporal (7 years) boundaries of the Project are clearly defined.

✌ The validation did not reveal any information that indicates that the Project can be seen as a diversion of official development assistance (ODA) funding towards the host country.

### 3.2 Participation (54)

The participation for each project participant has been approved by a Party of the Kyoto Protocol.

✌ Complying with para.54/VVM, Bureau Veritas Certification hereby confirms that by referring to the information on UNFCCC website i.e.

<http://maindb.unfccc.int/public/country.pl?country=CN>; and

<http://maindb.unfccc.int/public/country.pl?country=GB>

### 3.3 Project design document (57)

✌ Complying with para.57/VVM, Bureau Veritas Certification hereby confirms that the PDD complies with the latest Project Design Document Form (CDM-PDD) version 03.2 and guidance documents for completion of PDD version 07.

### 3.4 Project description

The Project is sited in Wulate Hou Qi, Bayannao'er City, Inner Mongolia Autonomous Region, P. R. China, which has geographical coordinates with north latitude of 41°30'20" and east longitude of 106°38'30".

The total installed capacity of the Project is 50MW with 40 wind turbines of unit capacity 1,250kW supplied by Sewind Co.,Ltd. (one of the largest domestic WTG manufacturer). The estimated annual electricity supplied is about 117,630MWh at the full capacity, which will be sold to the North China Power Grid (NCPG). As the NCPG is dominated by thermal power



generation, the establishment of the Project is expected an annual emission reduction of 124,076 tCO<sub>2</sub>e during the first seven years of its renewable crediting period.

The process undertaken to validate the accuracy and completeness of the project description was including the document review and cross-check with the relevant approvals issued by local governments by the validation team.

✌ Complying with para.64/VVM, Bureau Veritas Certification hereby confirms that the project description in PDD /Ref.02/ is accurate and complete in all respects.

### 3.5 Baseline and monitoring methodology

#### 3.5.1 Baseline and monitoring methodology

The Project uses the approved consolidated baseline and monitoring methodology ACM0002 version 09– “*Consolidated baseline methodology for grid-connected electricity generation from renewable sources*” dated 27/02/2009./1/

The assessment of the relevant information contained in the PDD against each applicability condition is described below:

- ✌ The Project involves the electricity capacity additions from wind power plant.
- ✌ The Project does not involve switching from fossil fuels to renewable energy at the site of the Project.
- ✌ The geographic and system boundaries for the North China Power Grid (NCPG) can be clearly identified and information on the characteristics of the NCPG is available.

Bureau Veritas Certification hereby confirms that the selected baseline and monitoring methodology is previously approved by the CDM Executive Board, and is applicable to the Project, which complies with all the applicability conditions therein.

Based on the on-site assessment, Bureau Veritas Certification hereby confirms that, as a result of the implementation of the proposed CDM project activity, there are no greenhouse gas emissions occurring within the proposed project boundary, which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

#### 3.5.2 Project boundary

The spatial extent of the Project boundary is clearly defined in line with ACM0002 version 09 as the physical, geographical site of Project and all other power plants connected physically to the NCPG that the Project is connected to.

✌ Complying with para.57/VVM, Bureau Veritas Certification hereby confirms that the identification of Project boundary is in line with the delineation of grid boundaries as provided in the latest version of “*Notification on Determining Baseline Emission Factor of China’s Grid*” published by China’s DNA on 18/07/2008 (hereafter called “*Notification of China-Grid EF*”). /Ref.17/



### 3.5.3 Baseline identification

As the Project is the installation of a newly built and grid-connected renewable power plant that delivers the generated electricity to the grid (NCPG), hence, according to methodology ACM0002, the baseline scenario is determined properly as:

The electricity delivered to the grid by the Project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “*Tool to calculate the emission factor for an electricity system*” version 01.1 dated 29/07/2008 (hereafter called “*Tool-Grid EF*”).<sup>13/</sup>

According to the “*Notification of China-Grid EF*”, the delineation of grid boundaries of the Project is the NCPG. Furthermore, the baseline of the Project determined in the PDD i.e. “the provision of an equivalent amount of power output by NCPG which the Project is connected to” is transparent and deemed to be reasonable.

✌ Complying with para.80 and 81/VVM, Bureau Veritas Certification hereby confirms that:

- (a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
- (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
- (e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

## 3.6 Additionality

### 3.6.1 Prior consideration of the CDM

The additionality of the Project has been assessed in accordance with the “*Tool for Demonstration and Assessment of Additionality*” version 05.2 dated 26/08/2008.(hereafter called “*Tool-Additionality*”) <sup>14/</sup>

The start date defined in the PDD is 28/07/2008, which is the date on which the PP signed the WTG contracts with the supplier, /Ref.09/ before the PDD submitted to Bureau Veritas Certification for validation. The PDD addressed the serious consideration on the incentives from CDM prior to the project implementation as per the “*Guidance on the demonstration and assessment of prior consideration of the CDM*” version 01 (Annex 46, EB 41). (hereafter called “*Guidance-Prior Consideration*”) <sup>15/</sup>

✌ Complying with para.102/VVM, Bureau Veritas Certification verified this issue which was considered much related to the additionality of the Project and can conclude that the serious consideration under the context of the Project has been addressed appropriately in accordance with the above guidance, consequently, the chronological events described with the relevant documented evidences can form the objective basis of the validation opinions of Bureau Veritas Certification. Accordingly Bureau Veritas Certification summarized a timeline



as Table 2 below and raised Clarification Requests for submission of the corresponding documented evidences.

**Table 2 Timeline of the Project**

Date	Actions	Reasons or Impacts	Evidences verified
November.2007	Completion of the FSR with two options i.e. 33 sets of 1.5MW and 40 sets of 1.25MW, in which the incentive of the CDM had been considered to improve the financial attractive as the IRR of both two options (5.50% and 5.35%) are lower than the benchmark (Ref.06)	The PP had to consider the CDM support to secure the Project to be financially feasible.	(Ref.06)-✓
20/12/2007	The PP made decision to seek CDM support. (Ref.07)	Put on agenda of CDM development	(Ref.07)-✓
25/01/2008	Signed ERPA contract with CRM (Ref.08)	Make sure the progress of CDM development	(Ref.08)-✓
05/05/2008	EIA approved by local EPA (Ref.16)		(Ref.16)-✓
03/06/2008	Signed validation contract with BV Certification (Ref.14)	Secure the progress	(Ref.14)-✓
23/07/2008	FSR approved (Ref.10)		(Ref.10)-✓
28/07/2008 (start date)	Signed WTG purchasing contracts with Sewind Co.,Ltd. (Ref.09)	Take real actions of project implementation.	(Ref.09)-✓
September 2008	Signed construction contracts of the Project. (Ref.12)	Take real actions for construction launch.	(Ref.12)-✓
22/09/2008	PDD submitted to China's DNA for application of LoA. (Ref.15)	Take real actions of project implementation.	(Ref.15)-✓
15/10/2008	PDD made for public comments	Validation launched	
26/11/2008	PP changed WTG's capacity from 1.5MW to 1.25MW and total capacity from 49.5MW to 50 MW (Ref.09)	Due to delivery delay caused by supply shortage of model 1.5MW.	(Ref.09)-✓
Nov.2008	China's DNA approved the LoA. (Ref.03)		(Ref.03)-✓



✌ By assessing the material actions taken by the PP with the corresponding documented evidences as above, Bureau Veritas Certification confirmed that the PP considered seriously the incentives from CDM in the context of the Project before taking its real actions, which is in accordance with the requirements of “Guidance – Prior consideration”. /5/

✌ According to the latest Glossary of CDM terms Ver.04 and the Paragraph 67 of EB 41 meeting, /7/ Bureau Veritas Certification was able to verify the start date of the Project and concluded that the date of 28/07/2008 defined in the PDD is appropriate and reasonable at that situation.

### 3.6.2 Identification of alternatives

Subsequently, Bureau Veritas Certification validated the additionality as addressed in the PDD of the Project.

The plausible and credible alternatives to the Project were identified as per the ACM0002 version 09:

Alternative (a): The proposed project not undertaken as CDM project;

Alternative (b): Construction of a fossil fuel power plant with equivalent amount of annual electricity output;

Alternative (c): Construction of a power plant using other source of renewable energy with equivalent amount of annual electricity output;

Alternative (d): Supply of equivalent annual power output supplied by NCPG

Alternative (b) was eliminated through examination of current practice in China in which the laws or regulations applies. /Ref.11/

Alternative (c) was eliminated by analyzing the availability of local renewable energy resources including Solar PV, geothermal, biomass and hydropower as addressed in the PDD./Ref.13/

✌ Complying with para.105/VVM, Bureau Veritas Certification was able to verify that the Project scenario and the baseline scenario defined to the Project are credible and hence found **Step 1** of “*Tool-Additionality*” was applied appropriately.

### 3.6.3 Investment analysis

Considering the baseline scenario as above identified, the Benchmark Analysis was applied in the Investment analysis as per the *Sub-step 2b* of **Step 2** of “*Tool-Additionality*”.

✌ Bureau Veritas Certification verified the applicability of the benchmark that project IRR of 8% used in the Project and can confirm that the data sources mentioned in the PDD, viz. “*Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects*” issued by State Power Corporation of China in 2002, /Ref.19/ is a national standard and project IRR of 8% has been a current practice in the power generation sector in China.

Before reviewing the IRR calculation, Bureau Veritas Certification firstly validated the basic parameters listed in the PDD in accordance with the Guidance of EB 38<sup>th</sup> paragraph 54/6/ and the para.112VVM.

a) The input values used in the Project were taken from the FSR completed by Inner Mongolia Power Exploration & Design Institute in November 2007, /Ref.06/ and approved by Development & Reform Commission of Inner Mongolia Autonomous on 23/07/2008. /Ref.10/ The tariff of 0.51 CNY per KWh used in the FSR is taken from the Notification of



electricity tariff for wind power projects in western Inner Mongolia Region issued by NDRC (Fa Gai Jia Ge [2007]1260) dated 09/06/2007, /Ref.18/ The conclusion in the FSR that seeks the incentive of the CDM to make the Project to be financially viable is based on this tariff officially endorsed by national government.

By checking the FSR, BVC confirms that the FSR refers to:

- Codes on Compiling Feasibility Study Report of Wind Farms;
- Preparation Rules and Calculation Standard for Budgetary Estimation of Wind Power Projects Feasibility Study Report issued by NDRC;
- Economic Evaluation Method and Parameters for Project Construction.

✌ Therefore, Bureau Veritas Certification can confirm that the input values used in the financial analysis are credible and reliable.

- b) The FSR was finalized in November 2007, and investment decision was soon made in December 2007, /Ref.07/ the period of time between the finalization of the FSR and the PP's final decision is thus considered very short.

✌ Consequently, Bureau Veritas Certification can confirm that it is unlikely in the context of the Project that the input values would have materially changed, which is in line with the paragraph 54 (a) of EB 38 and the para.112(a)/VVM.

- a) Bureau Veritas Certification has reviewed the input values used in the PDD and IRR calculation against the data of the approved FSR, and found that they are fully consistent with each other. Therefore, BVC confirmed that the investment analysis is in accordance with the paragraph 54 (b) of EB 38 and para.112(b)/VVM.

#### **-Tariff**

- 1) The tariff used in the PDD is sourced from the FSR and is valid and applicable at the time of the investment decision.

According to the FSR and PDD, the Project will supply electricity to West Inner Mongolia Grid, and then connected to North China Power Grid (NCPG), which includes six provincial grids. In China, investment circumstance, wind energy resources of each province are significant different, therefore, the West Inner Mongolia Grid Covered by NCPG is here identified as the same grid of the proposed project.

- ✧ The FSR of the Project was finished by a qualified third party in November 2007; the tariff of 0.51Yuan/kWh (Incl. VAT) used in the PDD was derived from the FSR directly.
- ✧ As for the Project, its FSR was completed in November 2007, the most recent tariff notification is the document Fa Gai Jia Ge [2007]1260 on 09/06/2007 (/Ref.33/).
- ✧ In Fa Gai Jia Ge [2007]1260, for wind power projects in West Inner Mongolia, the guiding tariff of the first 30,000 equivalent full load hours is 0.51Yuan/kWh (Incl. VAT), and the power generation after 30,000 equivalent full load hours will be the average tariff in the same region, which is 0.26276 Yuan/kWh (incl. VAT) in 2007 (/Ref.34/).

Therefore, BVC can confirm that the tariff of 0.51Yuan/kWh (Incl. VAT) in the FSR sourced from the government tariff notification was available at the time of the FSR being prepared. The value of tariff is appropriate and the way to use the tariff in the whole assessment period instead of in the first 30,000 equivalent full load hours is conservative.





- ✧ After the completion of the FSR, NDRC issued three other tariff notifications:
  - ✎ document Code Fa Gai Jia Ge [2007] No. 3303 on 03/12/2007 (Hereinafter referred to as "[2007]3303") (/Ref.35/)
  - ✎ document Code Fa Gai Jia Ge [2008] No. 1876 on 23/07/2008 (Hereinafter referred as "[2008]1876") (/Ref.36/)
  - ✎ document Code Fa Gai Jia Ge [2009] No. 1906 on 20/07/2009 (Hereinafter referred as "[2009]1906") (/Ref.37/)
- ✧ According to these notifications, the tariff of wind farm projects in West Inner Mongolia is still 0.51Yuan/kWh (Incl. VAT).

Thus BVC can confirm that the tariff of wind farm projects in West Inner Mongolia has been stable as 0.51Yuan/kWh (Incl. VAT) since June 2007, which can further prove that the tariff in the FSR and the PDD is reasonable and appropriate.

- 2) BVC understood the concerns of suitability of the applied tariff in the paragraph 48 of EB49 meeting report, and the concerns are clarified as follow:

- a) There was no E- Policies existed as at 11 November 2001 in China

According to paragraph 6(b) of Annex 3 EB 22, "National and/or sectoral policies or regulations that give comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programs)" is called E- Policies. The national policies on wind power generation technologies existed as at 11 November 2001 in China has been listed as below:

- In March 1996, Chengfeng Plan and Shuangjia Plan issued by National Planning Commission (one of the former organizations of NDRC). (/Ref.38/) It promoted the joint venture of domestic and foreign corporations for wind equipment manufacturing.
- In February 2000, Opinions on Accelerating Domestic Wind Power Generation Technology (Guo Jing Mao Zi Yuan [2000]122) issued by State Economic and Trade Commission (one of the former organizations of NDRC). (/Ref.39/) It supported the demonstration wind power projects that use domestic wind power generation technologies.

BVC has studied all above policies, and concluded that all the policies existed as at 11 November 2001 were aiming at accelerating of the domestic facilities manufacturing. They have led the development of domestic wind equipment and provided priorities of connection with grid for wind power projects that used domestic equipment.

In China, grid-connected wind power started to be developed in the late 1980s, and grew rapidly during the 11<sup>th</sup> Five-year Plan (2006-2010), with the total installed capacity increasing from 4.2MW in end of 1989 to 12,000MW in 2008. At the end of the year of 2003, the total installed capacity in China was still only 568.4 MW.

In 2006, the Chinese government issued National Renewable Energy Law (/Ref.05/) and Interim Measures for Renewable Energy Power Tariff and Cost-sharing (Document code: Fa Gai Jia Ge [2006] No.7) (/Ref.41/) and some other policies to increase the share of domestic wind power equipment in wind power projects, reduce wind power generation cost and increase the investment incentives. From then on, the wind power projects grew rapidly in China. The policies are listed below:



- Law of the People's Republic of China on Renewable Energies in 2006,
- Interim Measures for Renewable Energy Power Tariff and Cost-sharing (Document code: Fa Gai Jia Ge [2006] No.7) was issued by China NDRC in Jan. 2006 aiming to stimulate the development of renewable power project including wind power project. It is stated that the tariff of wind power projects should be guided by government.
- In Nov. 2006, the Notice for Stimulate Wind Power Development was issued by NDRC, (Fa Gai Jia Ge [2006]2535) (/Ref.42/), it is regulated to establish industrialization system for wind power projects, to enhance the evaluation of wind source, and to construction grid for wind power projects so that the wind power can be developed smoothly.
- In Jan. 2007, China issued Temporary Measures of Additional Income regulation of Renewable Energy Power, (/Ref.43/) to guarantee the tariff for renewable energy project should be implemented smoothly.
- In July 2009, NDRC Notice on Perfecting the Feed-in Tariff Policy issued by NDRC, (/Ref.37/) which improved the policy for wind farms tariff. Four different wind resource regions were defined based on wind resource status and project construction conditions with corresponding guiding tariffs.

As clarified above, there were no clear national or sectoral policies existed as at 11 November 2001, which resulted in wind power projects receiving a higher tariff or preferential treatment in comparison to common non-renewable power generation sources. Most of the wind farm projects in this area were government demonstration projects supported by international foundations or donor organizations. The tariffs given to projects at that time were based on the project developer's negotiation with the local governments individually. Some tariffs were much higher than that of common nonrenewable power generation sources, due to the immaturity of the wind sector, in respect of the turbines and the management level at that time. The earlier tariff was attributed to very few projects on a project-by-project basis.

The policies prior to 11 November 2001 were aimed at accelerating of the domestic equipment manufacturing rather than creating preferential incentives over other more emissions-intensive technologies.

Therefore BVC can confirm that no firm policy existed as at 11 November 2001 which resulted in wind power projects being certain of receiving a higher tariff or other preferential treatment in comparison to common non-renewable power generation sources.

- b) The net return to the investor has not been affected by the reduction in the tariff as a result of other changes

The approved tariff of wind power projects at present in China are public available and tends to be more unified. From 2007 up to now, the same tariff of 0.51Yuan/kWh was approved for all wind power projects in West Inner Mongolia.

Two models for determining tariff of wind power projects exist in China; viz. the tariff of wind power projects can be determined through tendering process or approved by government which is commonly applied in China. BVC has checked all previous tendering notifications, and therefore can confirm that the tariff of the Project was not determined via a tendering process. (/Ref.44/)





Table 3 and Table 4 summarize all wind power projects in West Inner Mongolia exporting electricity to NCPG, including both CDM and non CDM projects. The data is sourced from:

- ↪ Statistics of installed capacity of wind power in China in 2007, Professor Shi Pengfei (for projects completed turbine installation before 31/12/2007) (/Ref.25/)
- ↪ the tariff Notification Nei Fa Gai Jia Ge [2004] No. 1093 issued by Inner Mongolia Development and Reform Commission on 26/06/2004, (hereinafter referred to [2004]1093) (/Ref.45/)
- ↪ the tariff Notification Fa Gai Jia Ge [2006] No. 2908 issued by National Development and Reform Commission (NDRC) on 22/12/2006, (hereinafter referred to as [2006]2908) (/Ref.47/)
- ↪ the tariff notification Fa Gai Jia Ge[2007]1260 issued by NDRC on 09/06/2007 (hereinafter referred to as [2007]1260) (/Ref.33/)
- ↪ the tariff notification Fa Gai Jia Ge [2007]3303 issued by NDRC on 03/12/2007 (hereinafter referred to as [2007]3303) (/Ref.35/)
- ↪ the tariff notification Fa Gai Jia Ge [2008]1876 issued by NDRC on 23/07/2008 (hereinafter referred to as [2008]1876) (/Ref.36/)
- ↪ China Wind Power Report 2008, published by China Renewable Energy Institute Association (CREIA) and WWF in October 2008 (/Ref.44/)
- ↪ Cross-checked with information on UNFCCC web site.

Table 3- Wind Power Projects whose tariff was approved by government

Table 6 Wind Power Projects whose tariff was approved by government				
No	Project Name	Tariff	Tariff Document	
	<b>Project before 2002</b>			
1	Shangdu Dashanwan Wind Farm	0.609	<a href="http://www.newenergy.org.cn/Html/00412/20041605.html">http://www.newenergy.org.cn/Html/00412/20041605.html</a>	
2	Xilinhote Baoligenshan Wind Farm	0.64786		
3	Sonid Youqi Zhurihe Wind Farm	0.6094		
4	Qahar Youyi Zhongqi Huitengxile Wind Farm	0.609		
	<b>Project after 2002</b>		Time	Code
5	Huitengxile Windfarm Project	0.55	2004	[2004]1093
6	Inner-Mongolia Ximeng Abag 49.5MW Wind Power Project	0.579	6-Dec-2006	[2006]2908
7	Inner Mongolia Wulatezhongqi Wind farm	0.5497		
8	Inner Mongolia Bailingmiao Wind-farm	0.548		
9	Inner Mongolia Datang Zhuozi Wind Farm	0.51	7-Jun-2007	[2007]1260
10	Inner Mongolia Bayannaoer Chuanjingsumu 49.3MW Wind Power Project	0.51	7-Dec-2007	[2007]3303
11	Expansion Project of Huadian Inner Mongolia			

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	Huitengxile Wind Farm			
12	Guohua Inner Mongolia Huitengliang West Wind Farm Project			
13	Goldwind Damao Wind Farm Project			
14	Fuhui Inner Mongolia Tugurige Wind Farm Project			
15	Fuhui Inner Mongolia Narenbaolige Wind Farm Project			
16	Inner Mongolia Bayinhanggai 49.5MW Wind Farm Project			
17	Guohua Inner Mongolia Huitengliang Wind Farm Project			
18	Inner Mongolia Huitengliang 49.5MW Wind Power Project			
19	Inner Mongolia North Longyuan Huitengxile WindFarm Project			
20	Xilinguole Huitengliang Wind Power Project Phase I			
21	Inner Mongolia North Longyuan Zhurihe WindFarm Project			
22	Inner Mongolia Bayannaoer Chuanjingsumu Wind Power Project			
23	Inner Mongolia Siziwangqi Bayin'aobao Wind Power Project			
24	Sinohydro Inner Mongolia Ximeng Honggeer Wind Power Project			
25	Inner Mongolia Goldwind Damao Wind Farm Phase II Project			
26	Inner Mongolia Bayinxile Wind Power Project			
27	Inner Mongolia Ximeng Zheligentu Wind Farm Phase I Project			
28	Inner Mongolia Hangjin Yihewusu Wind Power Project			
29	Inner Mongolia Zhuozi II Wind Power Project			
30	Inner Mongolia Bayin'aobao 49.5MW Wind Farm Project (Phase I)			
31	Inner Mongolia Saiwusu I Wind Power Project			
32	Beijing Energy Huitengxile 49.5MW Wind Power Project			
33	Baiyun Ebo Wind Farm Inner Mongolia			
34	Alashan Bayannuoergong Wind Farm Project			
35	Bayannaoer Wulatehou Qi Hailisu Wind Farm Project			
36	Xilinguole Huang Qi Huawei Wind Farm Project			
37	Chuanjing Wind Farm Inner Mongolia Luneng Phase II			
38	Inner Mongolia Duolun Daxishan 30.6MW Wind Power Project	0.51	8-Jul-2008	[2008]1876
39	Inner Mongolia Taipusi Gongbaolage Wind Farm Project			

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40	Inner Mongolia Ximeng Huitengliang Area Phase I Wind Power Project			
41	Inner Mongolia Huitengliang Phase II Wind Power Project			
42	Inner Mongolia Bayannaoer Chuanjingsumu III Wind Power Project			
43	Inner Mongolia Erlianhaote Phase I Wind Farm Project			
44	Inner Mongolia Wuliji Wind Farm Project ( <b>the Project</b> )	0.51	4-Sep-2009	Nei Fa Gai Jia Zi [2009]2013
45	IMAR Debaotu Wind Farm Phase I 49.5MW Project	0.51	2-Nov-2009	Nei Fa Gai Jia Zi [2009]2406

Table 4 Wind Power Projects whose tariff was determined via a tender process

No	Project Name	Tariff	Time	Phase of concession
46	Huadian Inner Mongolia Huitengxile 100.25MW Wind Farm Project	0.382	2004	Phase II
47	Inner Mongolia Huitengxile Jingneng 100MW Wind Power Project			
48	CGN Inner Mongolia Huitengliang 300MW Wind Power Project	0.4056	2006	Phase IV
49	North Longyuan Huitengliang Wind Power Farm Project	0.42		
50	Inner Mongolia Baotou Bayin Wind Power Project	0.4656		
51	Inner Mongolia Wulanyiligeng 300MW Wind Power Project	0.468	2008	Phase V

## Note:

- ↳ The unit of tariff is Yuan/kWh (Incl. VAT)
- ↳ It was stated in the tariff document [2006] 2908, [2007]1260, [2007]3303 and [2008]1876 that the tariff for power generation after 30,000 equivalent full load hours will be the average tariff in the same region. Tariff notification Nei Fa Gai Jia Zi [2009]2013 and Nei Fa Gai Jia Zi [2009]2406 based on Fa Gai Jia Ge [2009]1906.

In conclusion, with the implementation of National Renewable Energy Law (/Ref.05/) and Interim Measures for Renewable Energy Power Tariff and Cost-sharing issued by NDRC (Document Code: Fa Gai Jia Ge [2006] No. 7) (/Ref.41/) from 2006, the tariff of most wind power projects began to be approved by government. The approved tariff of wind power projects at present in China are public available and tends to be more unified. From 2007 up to now, the same tariff of 0.51Yuan/kWh was approved for all wind power projects in West Inner Mongolia. With the available data source, BVC can find there are total 51 wind power projects exporting electricity to Inner Mongolia Grid covered by NCPG.

For the projects commissioned before 2000, i.e. No. 1 to 4 in Table 3, they are demonstration projects and have significant distinctions with the projects in the commercial circumstance, i.e. these projects are demonstration projects, benefited from more favorable financial policy, which were funded by national soft loan and international low interest loan respectively. Thus these four projects are not comparable to the Project.



A statistics of the basic input values of the conventional wind farm projects in west Inner Mongolia are listed in Table 5 below,

Table 5 Basic input values of conventional wind farm projects in west Inner Mongolia

Index in Table 3	Approval	Date	Approved Tariff (incl. VAT) Yuan/kWh		Average investment (10 <sup>4</sup> Yuan/kW)	Average O&M cost (Yuan/kW)
5	[2004]1093	Jun-2004	0.55		NA	NA
6-8	[2006]2908	Dec-2006	0.579 0.5497 0.548	0.5589	11,006	236
9	[2007]1260	Jun-2007	0.51		9604	245
10-37	[2007]3303	Dec-2007	0.51		9453	193
38-45	[2008]1876	Jul-2008	0.51		9291	243

From the data in the Table 5 above, BVC can confirm that the tariffs slightly decreased in west Inner Mongolia and kept stable at 0.51 Yuan/kWh (incl. VAT) from June 2007.

The 4 early projects were on average 8.75% higher than the unified tariff of 0.51 Yuan/kWh (incl. VAT) (and up to 11.9% from 0.579 to 0.51) since June 2007. On the other hand, these early projects had a 15.58% higher average investment cost per kW than recent projects. The variation of the average O & M cost is not significant.

Furthermore, even considering the highest tariff in the West Inner Mongolia of 0.579 Yuan/kWh (including VAT) for the whole assessment period of the Project (this tariff was only award for the first 30,000 hours), the IRR is only 7%, and still lower than the benchmark of 8%.

By reviewing relevant documents, BVC is able to confirm that investment costs of wind power have been reduced in recent years:

- The wind power technology and equipment maintenance becomes more and more mature, and domestic wind turbines have been introduced more and more to some extent, e.g. the market share addition for domestic manufacturers from 2004 to 2007 was 25%, 29.4%, 41.3%, and 55.9% respectively (/Ref.25/);
- The price of domestic wind turbine is 20% less than that of the imported wind turbines; the price of wind turbines manufactured in China for overseas manufacturer is 10% less than that of manufactured abroad. (/Ref.46/)

Based on the explanations above, BVC is able to confirm that no reduction in the incentives for investment in wind energy due to the slightly lower tariff of projects compared with previous tariff. the net return reduction could be unaffected by the decreasing of the tariffs in the west Inner Mongolia since 2002. The tariff for wind power projects in West Inner Mongolia has been stable at 0.51Yuan/kWh (Incl. VAT) since July 2007.

Therefore, BVC is able to confirm that the tariff in the PDD is appropriate.



### **-Annual power output**

In addition to the tariff, the value of annual power output is also a key parameter for the revenue of the Project. Bureau Veritas Certification has reviewed the approved FSR of the Project and found the value of annual power output was determined based on

- ↳ The wind resource data of the latest 30 years (1977 to 2006) in the region:
- ↳ Integrating the generation efficiency of the WTGs and the captive power of the wind farm, the annual power supplied to NCPG will be 117,630MWh;
- ↳ The load factor of 26.86% is derived from the FSR determined by the third independent design institute based on the reliable data of local wind resources of 30 years long and approved by local DRC, which is in accordance with EB48 Annex 11. Therefore, BVC confirms that the power generation is deemed reasonable.

However, as a result of supply shortage in the local market, the turbine models were changed to 1.25MW after the PDD made for public comments./Ref.09/ Consequently, the annual power generation of total capacity of 50 MW is used in the PDD as defined in the FSR./Ref.09/

To reflect the real situation of the Project, the power output value of the actual capacity is used in the PDD.

### **-Total investment**

Realizing the Project is still in the process of construction, the actual values of total investment of the Project can not be verified exactly, and then the validation team reviewed those contracts signed with the key contractors and the equipment suppliers of the Project, including Wind Turbine Purchase Agreement, Tower Purchase Agreement, Construction Contract of the Wind Turbine & Generator, Construction Contract of the Substation, and found that regardless the extra investment result from some additional engineering quantities during the construction, the investment spent on the main equipment purchasing, transportation and installation has been reached the corresponding sub-items in the FSR.

Furthermore, the validation team replicated the unit cost of the Project is 10,800 CNY per KW capacity (540.48 million CNY ÷50MW) and found that it is within the reasonable range of official statistics of wind farms investment./Ref.30/

According to the comparison of the two options of turbine selection in the approved FSR, the total investment of 50MW (40x1.25MW) is lower than 49.5MW (33x1.5MW) by 0.4%, while, as aforementioned above, the annual output of 50MW option is lower than 49.5MW by 3.2%, consequently, as the conclusion of the FSR, the IRR of 50MW option is 5.35% /Ref.06/ which is lower than the 5.50% of IRR of 49.5MW option as indicated in the PDD version 1.1 made public available. Therefore, the input values for financial analysis in the PDD version 2 are taken from the parameters of 50 MW option used in the FSR.

### **-Annual O&M costs**

The O&M costs in the approved FSR were derived from the extensive experience of the developer and the design institute. According to the Codes on Compiling Feasibility Study Report of Wind Farms, the O & M costs mainly includes the repair cost, salary & social welfare, materials fee, other fee /4/, etc. By checking the registered wind power projects in West Inner Mongolia on UNFCCC website, it was found that the O&M costs falls in the range of the registered CDM projects. Therefore, the O&M costs are deemed reasonable.



Regarding the other fee and materials fee, BVC has checked relevant document as follows:

-According to the Codes on Compiling Feasibility Study Report of Wind Farms, the 'other fee' and 'materials fee' are the components of the O & M costs. The detailed component of the other fee comprises of business travel, office expenses, training fees, daily transport costs and union fees, etc. The 'materials fee' is the expense for the objects used & consumed in the daily work.

-A letter of the presentation about the 'other fee' and 'materials fee' from the Inner Mongolia Power Exploration & Design Institute declares that 'other fee' and 'materials fee' were estimated based on consideration of actual situation of nearby operated wind farms and the characteristics of the Project, and the values of 'other fee' and 'materials fee' are 18.82 Yuan/kW (8 Yuan/MWh) and 14.116 Yuan/kW (6 Yuan/MWh), respectively. The 'other fee' of the Project includes the business travel, office expenses, training fees, daily transport costs and union fees. The detailed break down for the items in 'other fee' shown in the table below.

Table 1 Detailed break down of the other fee

Items	Total (thousand Yuan/year)	Cost per kW (Yuan/kW)
Office expenses	187.5	3.75
Business travel	237.5	4.75
Training fees	237.5	4.75
Daily transport costs	187.5	3.75
Union fees	91	1.82
Total	941	18.82

Furthermore, BVC had made a statistic of the registered projects in West Inner Mongolia on UNFCCC website and found that the range of other fee is 8~40 Yuan/kW and the materials fee is 4.24~14.97 Yuan/kW. The values for the investment analysis of the Project are within the range thus BVC can confirm that materials fee and other fee used in the IRR calculation is appropriate.

Additionally, even if the 'other fee' and 'material fee' drop to zero the IRR would hardly change and still only be 5.73%, the IRR does not hit the benchmark.

Therefore, BVC can confirm that the input values to the investment analysis, including 'materials fee' and 'other fee' as part of annual O&M cost is in accordance with the requirement of **VVM, Para. 111(c)**. Bureau Veritas Certification also verified values of various taxes through cross-check with the taxation rules conducted by the National Administration of Taxation at that time and found to be fully consistent.

✌ In summary, based on the above reliable data sources, the validation team was able to conclude that the input values from the approved FSR are valid and applicable at the time of making the investment decision. Therefore, Bureau Veritas Certification confirmed that the input values used in the PDD meet the guidance of EB 38 paragraph 54 and **para.112(c)/VVM**.

Based on the above conclusion, Bureau Veritas Certification reviewed the IRR calculation and found that the calculation is correct and in accordance with "Guidance on the assessment of investment analysis" Version 02 (as the annex of "Tool- Additionality" Ver.05.2). 14/ As it shows, without CDM income, the project IRR of the Project is 5.35% for the 50MW option





occurred actually, which is lower than the benchmark (8%)/Ref.21/

In the step of Sensitivity analysis, four financial indicators were identified with a variation range over  $\pm 10\%$  for evaluation:

- [1]. Total static investment
- [2]. On-grid tariff
- [3]. Annual Power generation
- [4]. Annual O&M cost

As it shows, the IRR will remain below the benchmark from -10% to +10%.

Bureau Veritas Certification reviewed the same in the FSR and confirmed that the indicators identified and the variation range employed in the PDD are consistent with the approved FSR and also in accordance with the prescription of the “Codes on Compiling Feasibility Study Report of Wind Farms” issued by NDRC on 20/07/2007. /Ref.20/ Then, the validation team reproduced the calculation based on the IRR spreadsheet and worked out the same outcomes as it shows.

Furthermore, Bureau Veritas Certification verified the reliability and robusticity of the above outcomes.

[1]. [4].

Given the increasing pricing level of construction materials, and employee wages recently in China, the validation team can confirm that the total static investment or Annual O&M cost would not be decreased over 10%. Even if taking into account the current financial crisis which is spreading globally, the pricing both of raw materials and fuels is still increased overall by 10.5% in 2008 vs 2007./Ref.31/ Based on above situation, the total investment of the Project is unlikely to be reduced by 17.95% so as to make the project IRR reach the benchmark, while the decrease of the Annual O&M cost down to zero is evidently impossible.

[2]

Taking into account the aforementioned tariff rules, the validation team confirmed that the tariff for the wind power projects in West Inner Mongolia has been stable at 0.51Yuan/kWh (Incl. VAT) since July 2007, and the tariff of the Project has been approved as 0.51 YUAN/kWh (incl. VAT) in the tariff notification Neifagaijiage [2009]2013 dated 4/09/2009/Ref.56/. Furthermore, the critical tariff of 0.625Yuan/kWh (Incl. VAT) for the full project life is 8% higher than the highest tariff awarded since Power Sector Reform in 2002 in West Inner Mongolia. Therefore, the validation team can confirm that the tariff to the Project is unlikely increased by 22.56% to reach the benchmark.

[3].

As the FSR, the annual electricity output is estimated by a professional third party with the qualification in power sector viz. Inner Mongolia Power Exploration & Design Institute and based on the reliable data of local wind resources of 30 years long. Therefore the validation team considered it is unlikely that the electricity output increases over the critical point of 22.56% at which the IRR reaching the benchmark.

Considering of the CERs sales revenues (calculated with EURO13/tCO<sub>2e</sub>), the project IRR of the Project can be improved to 9.42% exceeding the benchmark.

✌ Complying with para.112/VVM, Bureau Veritas Certification can conclude that both of the variation range and relevant assumptions stated in the PDD are robust and the



investment of the Project is deemed to be financially unattractive, thus the Project is additional.

### 3.6.4 Barrier analysis

The **Step 3** Barrier analysis was not applied for the Project.

### 3.6.5 Common practice analysis

The Common practice analysis was addressed as per **Step 4** of “*Tool-Additionality*” and latest rules issued by EB.

Taking into account the geographical location of wind resources in China, Inner Mongolia autonomous is known as the largest one of the six typical wind resources areas in China, hence Bureau Veritas Certification considered that delineating Inner Mongolia region as the border is large enough to the analysis. In addition, a more commercialized power market had been set up in China since 2002 with the significant change in the tariff mechanism and the investment environment.

Subsequently, Bureau Veritas Certification defined the similar projects in terms of the technical and investment environmental and concluded that the wind farms with total installed capacity no less than 15MW, commissioned after 2002, under same tariff rules as the Project and without CDM development should be sorted out. Following this criteria Bureau Veritas Certification verified the wind farms as identified in the PDD by cross-checking the public statistics i.e. “*Statistics of wind power installed capacity in China*” Version 2006 dated 18/03/2007 and Version 2007 dated 28/02/2008” written by Mr. Shi Pengfei, the authoritative Expert in the wind power sector (hereafter refer to as SWPC). /Ref.25/ As the public information presents, the “Dali Wind Power Project Phase III wind farm” with capacity of 31.2MW and commissioned in 2004 and “Da Mao Qi Bailingmiao wind farm” with capacity of 35MW and commissioned in 2008 can be sorted out as per the above criteria. While, it also presents that, this project “Dali Wind Power Project Phase III wind farm” is a demonstration wind power projects subsidized by the national debt fund issued by the national government in 2000, /Ref.26/, while the project “Da Mao Qi Bailingmiao wind farm” is invested by foreign investors, has been validated as a VER project under Golden Standard program. /Ref.27/

Therefore, it is evident that there are essentially differences to the Project in the investment environment. Bureau Veritas Certification verified the description in the PDD and found that it is consistent with the sectoral statistics and can conclude that the Project is not common practice in the region.

✎ Complying with para.119/VVM, Based on above demonstration that in accordance with “*Tool-Additionality*” and supported by reliable data sources, it is the opinion of Bureau Veritas Certification that the Project is thus additional.

## 3.7 Calculation of GHG Emissions

According to the baseline methodology ACM0002 Version 09 and “*Tool-Grid EF*” version 01.1, /3/ the emission reductions from the Project were calculated as following six steps. In addition, the calculation in the PDD refers to the latest “*Notification of China-Grid EF*” published by China’s DNA on 18/07/2008 which is valid and most available at the time of the validation.

As per “*Tool-Grid EF*” version 01.1, six steps therein are applied to calculate the emission factor:

**Step 1.**-Identify the relevant electric power system.





The North China Power Grid is selected as the electric power system of the Project and, Northeast China Power Grid (NEPG) and Central China Power Grid (CCPG) are identified connected electric power system since there are net electricity imports from NEPG and CCPG to the NCPG. The weighted average operating margin (OM) emission rate of the exporting grid (NEPG and CCPG) is selected to calculate the CO<sub>2</sub> emission factor(s) for net electricity imports.

✌ Bureau Veritas Certification was able to verify the data sources of “*Notification of China-Grid EF*”, and confirmed that the identified electric power system is appropriate.

**Step 2.-Select an operating margin (OM) method.**

For the calculation of the OM emission factor, the simple OM emission factor calculation method is selected because low cost/ must-run projects constitute less than 50% of the total grid generation during the last 5 years.

✌ Bureau Veritas Certification has checked the calculation for low cost/ must-run constitution of the total grid generation and confirmed the calculation is correct. Therefore, simple OM emission factor calculation method is selected reasonable. Data from China Electric Power Yearbook 2003-2007 has been applied correctly.

**Step 3.-Calculate the operating margin emission factor according to the selected method.**

The data on electricity generation and auxiliary electricity consumption are obtained from the China Electric Power Yearbook from 2005 to 2007 (published annually). The data on different fuel consumptions for power generation and the net caloric values of the fuels are obtained from the China Energy Statistical Yearbook from 2005 to 2007. The emission factors of the fuels adopted are obtained from Table 1-2 and Table 1-4 of the “*2006 IPCC Guidelines for National Greenhouse Gas Inventories: Workbook*.”

The renewable crediting period is adopted for the Project and the OM will be fixed for the first crediting period.

✌ The data source are deemed reasonable and Bureau Veritas Certification confirms that the calculation can be replicated using the data and parameter provided in the PDD.

**Step 4.-Identify the cohort of power units to be included in the build margin (BM).**

The set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently (Option b) is adopted properly for the Project.

Considering data availability, deviation accepted by EB was used in the PDD i.e.

- 1) Use of capacity additions during the last 1~3 years for estimating the build margin emission factor for grid electricity.
- 2) Use of weights estimated using installed capacity in place of annual electricity generation.

✌ Bureau Veritas Certification hereby confirms that the data source and approaches taken are deemed reliable.

**Step 5.-Calculate the build margin emission factor.**



The BM emission factor of the power grid is calculated by multiplying the emission factor of the thermal power with the share of the thermal power in the most recently added approach to 20% of total installed capacity. The emission factor for thermal power is determined based on the most advanced and commercially available technology endorsed by China's DNA.

✌ Bureau Veritas Certification hereby confirms that the data sources are deemed reliable and calculation is appropriate.

#### **Step 6.-Calculate the combined margin (CM) emissions factor.**

According to the "Tool-Grid EF" the default weights:  $\omega_{OM} = 0.75$  for Operating Margin and  $\omega_{BM} = 0.25$  for build Margin in the first crediting period of Wind Power Projects are adopted.

As per baseline methodology ACM0002 and "Tool-Grid EF", the baseline emission sources considered are the emission reduction  $ER_y$  during the crediting period is the difference between baseline emissions, project emissions and leakage. These are:

- 1) Baseline emissions: baseline emissions  $BE_y$  (tCO<sub>2</sub>) are equal to baseline emission factor  $EF_{grid,CM,y}$  (tCO<sub>2</sub>/MWh) times the net electricity supplied to the grid  $EG_y$  (MWh).
- 2) Project Emissions: the project emissions are regarded as zero for wind power projects as per the ACM0002 version 09.
- 3) Leakage: no leakage has to be considered for the proposed project activity since no energy generating equipment is transferred from or to the project site.
- 4) Emission reductions:

$$ER_y = BE_y - PE_y - LE_y = BE_y = EF_{grid,CM,y} \times EG_y$$

With reference to the Tool-Grid EF, the Simple OM emission factor ( $EF_{grid,OM,y}$ ) of NCPG is calculated as 1.1169 tCO<sub>2</sub>e/MWh. Similarly, the build margin emission factor ( $EF_{grid,BM,y}$ ) of the NCPG is calculated ex-ante as 0.8687 tCO<sub>2</sub>e/MWh.

Therefore the combined baseline emission factor is determined ex-ante and will remain fixed during the first crediting period, viz.

$$EF_{grid,CM,y} = 1.1169 \times 0.75 + 0.8687 \times 0.25 = 1.0548 \text{ (tCO}_2\text{e/MWh)}$$

According to the estimated annual electricity delivered to the grid 117,630MWh, the estimated annual emission reductions of the Project is 124,076 tCO<sub>2</sub>e during the first crediting period represents a reasonable estimation using the assumptions given by the Project.

✌ Complying with para.91 and 92/VVM, Bureau Veritas Certification hereby confirms that:

- (a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD; /Ref.17/
- (c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- (d) The baseline methodology ACM0002 and "Tool-Grid EF" has been applied correctly to calculate project emissions, baseline emissions, leakages and emission reductions; /1/,/3/
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.



### 3.8 Monitoring Plan

The Project uses the approved consolidated monitoring methodology ACM0002 version 09 for zero emissions grid connected electricity generation from renewable sources.

Applicability of this methodology is justified in PDD as it involves grid connected renewable power generation using wind energy. Refer discussions on the validity of the methodology at Section 3.2 above.

The combined margin emission factor is determined ex-ante based on the most recent information available. Accordingly the monitoring plan includes quantity of electricity exported to and quantity of electricity imported from the grid.

According to ACM0002 version 09 no leakage has to be considered for the Project since no energy generating equipment is transferred from or to the site, viz.  $LE_y=0$ .

Operational management for the project activity is comprehensively detailed in PDD and this includes description of the responsibility, training, procedure reference, equipment details, calibration frequency and maintenance needs are clearly mentioned. Archiving of the records was indicated and the validation team is of the opinion that the retrievability of relevant CDM project activity records is pro-actively considered satisfactorily.

According to the power connection system schemed by the grid company, the grid-connected electricity generated by the proposed project will be monitored through metering equipment with accuracy class of 0.5s at the substation on grid side (interconnection facility connecting the plant to the grid). The monitoring equipment includes two meters. The check meter will be installed at the project site. The revenue meter (main meter) is designed at the substation on the grid side. At the same time, the data can be monitored and recorded by the designated person each month.

Monitoring of sustainable development indicators is not required for such Projects in China in the light of minor environmental impacts.

✌ Complying with para.122/VVM, Bureau Veritas Certification hereby confirms that the project participants are able to implement the monitoring plan.

### 3.9 Environmental Impacts

The validation team has ensured that the Environmental Impact Assessment was carried out by Inner Mongolia Power Exploration & Design Institute on 07/11/2007, and approved by the Inner Mongolia Provincial Environmental Protection Bureau on 05/05/2008. (Document No. Nei Huan Shen (Biao)[2008]no.95). /Ref.16/

The environmental impact results from the Project have been identified and analyzed in the PDD. By checking the EIA report the validation team is able to ensure that the environment impacts occurs mainly in the construction period due to waste water, dust and exhaust gas, noise pollution, solid waste, and ecological impact. All above impacts would be within an acceptable limit by carrying out corresponding mitigation measures as per the statement of the EIA.

✌ Complying with para.131/VVM, Bureau Veritas Certification hereby confirms that concluded that the Project will not have any significant impacts on the environment by means of measures of pollution avoidance and control as well as ecological recovery.



### 3.10 Local Stakeholder consultation

In February 2008, the Project owner introduced the Project to local stakeholders and invited comments from the local stakeholders. /Ref.29/ The survey was conducted through distributing 40 copies of questionnaires and collecting responses from all interviewee from Wulate Hou Qi, and 40 questionnaires were recovered with 100% recovery rate. /Ref.29/

This survey shows that the interviewees well know about the Project and support the construction of the Project. All interviews agree the Project will promote the local economy. The majority believed that the Project will positively affect their lives, has good impact on the environment. No negative comments received. The validation team interviewed the local stakeholders during the on-site visit of the validation process and received the consistent responses. Furthermore, the validation team also assessed the documented evidences including meeting minutes, attendee list and questionnaires answered by the stakeholders, and found the adequacy of the local stakeholder consultation.

✌ Complying with para.128/VVM, Bureau Veritas Certification hereby confirms that the local stakeholder consultation was performed Project will benefit to the local sustainable development without positively affect to the local stakeholders.

## 4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Validation of CDM projects, the DOE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available.

✌ Complying with para.166/VVM, Bureau Veritas Certification published the project documents on the UNFCCC CDM website (<http://cdm.unfccc.int>) on 15/10/2008 and invited comments within 13/11/2008 by Parties, stakeholders and non-governmental organizations.

No comments were received during this period.

## 5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the Inner Mongolia Wuliji Wind Farm Project in P.R.China. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

Project participant/s used the latest *Tool for demonstration and assessment of additionality* (version 05.2), *Paragraph 54 of EB 38* and the *Guidance-Prior consideration* -*Guidance on the demonstration and assessment of prior consideration of the CDM* (version 01) to demonstrate the additionality of the Project. In line with this tool, the PDD provides analysis of investment barriers to determine that the project activity itself is not the baseline scenario. The latest *Tool to calculate the emission factor for an electricity system* (version 01.1) is also applied to determine the emission factor of North China Power Grid.

By synthetic description of the project, the Project is likely to result in reductions of GHG emissions partially. An analysis of the investment barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project



are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 2) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

The validation is based on the information made available to us and the engagement conditions detailed in this report.

## 6 REFERENCES

### Category 1 Documents:

Documents provided by Type the name of the company that relates directly to the GHG components of the project.

Ref.01.	PDD Version 1.1 dated 17/09/2008
Ref.02.	PDD Version 2 dated 26/03/2009
Ref.03.	Letter of Approval from China' DNA dated November 2008
Ref.04.	Letter of Approval from UK's DNA dated 24/02/2009
Ref.05.	National Renewable Energy Law issued by NDRC of China effective from 01/01/2006. <a href="http://www.windpower.org.cn/news/links/fl_2005_0510_02.htm">http://www.windpower.org.cn/news/links/fl_2005_0510_02.htm</a>
Ref.06.	Feasible Study Report (FSR) completed by Inner Mongolia Power Exploration & Design Institute in November 2007.
Ref.07.	PP's Board Resolution formally made on 20/12/2007.
Ref.08.	CDM ERPA signed with CRM dated 25/01/2008
Ref.09.	Equipment purchasing agreement with Sewind Co., Ltd. signed on 28/07/2008 and 26/11/2008 respectively for two options.
Ref.10.	The FSR approved by Development & Reform Commission (DRC) of Inner Mongolia Autonomous on 23/07/2008 (Doc. No. Nei Fa Gai Neng Yuan Zi [2008]no.1411)
Ref.11.	Notice on Strictly Prohibiting the Installation of Fuel fired Generators with the Capacity of 135MW or below issued by the General Office of the State Council, Decree No. 2002-6. <a href="http://www.gov.cn/gongbao/content/2002/content_61480.htm">http://www.gov.cn/gongbao/content/2002/content_61480.htm</a> <a href="http://www.gov.cn/xxgk/pub/govpublic/mrlm/200803/t20080328_32761.html">http://www.gov.cn/xxgk/pub/govpublic/mrlm/200803/t20080328_32761.html</a>
Ref.12.	Signed construction contracts with the contractor Inner Mongolia No.1 Power Construction Project Co., Ltd. in September 2008.
Ref.13.	"Expensive costs block the development of Solar PV in China" dated 20/09/2007 <a href="http://finance.people.com.cn/GB/1038/59942/59949/6294546.html">http://finance.people.com.cn/GB/1038/59942/59949/6294546.html</a>
Ref.14.	Validation contract signed with BV Certification on 03/06/2008.
Ref.15.	Bulletin on 53 <sup>rd</sup> Meeting of National CDM Board issued by China's DNA on 22/09/2008 <a href="http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1942.pdf">http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1942.pdf</a>
Ref.16.	EIA report completed by Inner Mongolia Power Exploration & Design Institute in November 2007 and approved by Inner Mongolia Environmental Protection Bureau on 05/05/2008. (Doc. No. Nei Huan Shen (Biao) [2008] no.95)





Ref.17.	Notification on Determining Baseline Emission Factor of China's Grid dated on 18/07/2008. <a href="http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1875.pdf">http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1875.pdf</a>
Ref.18.	Notification of electricity tariff for wind power projects in China issued by NDRC (Fa Gai Jia Ge [2007]1260) dated 09/06/2007, 0.51 CNY per KWh.
Ref.19.	Notification of electricity tariff for wind power projects in China issued by NDRC (Fa Gai Jia Ge[2007] 3303) dated 03/12/2007, 0.51 CNY per KWh.
Ref.20.	The Codes on Compiling Feasibility Study Report of Wind Farms issued by NDRC in 2007.(DL/T 5383-2007) dated 20/07/2007
Ref.21.	Data source of Benchmark of 8% (Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects)
Ref.22.	The notification of adjusting on-grid tariff to NCPG issued by NDRC on June 29, 2008, No (2008)1677
Ref.23.	Provisional Administrative Measure on Pricing and Cost Sharing for Renewable Energy Power Generation issued by NDRC date 04/01/2006
Ref.24.	IRR calculation spreadsheet of the Project
Ref.25.	Statistics of wind power installed capacity in China written by Mr. Shi Pengfei Version 2006 dated 18/03/2007 <a href="http://www.nwtc.cn/Article/UploadSoft/200605/20060508061645569.doc">http://www.nwtc.cn/Article/UploadSoft/200605/20060508061645569.doc</a> and Version 2007 dated 28/02/2008" <a href="http://www.gsec.gov.cn/ClassNews.asp?newsID=664">http://www.gsec.gov.cn/ClassNews.asp?newsID=664</a>
Ref.26.	Public information of Dali Phase III Wind Farm <a href="http://www.chifeng.gov.cn/html/2008-11/3130.shtml">http://www.chifeng.gov.cn/html/2008-11/3130.shtml</a>
Ref.27.	Public information of Da Mao Qi Bailingmiao wind farm <a href="http://china.camcoglobal.com/zh/chinacasestudyview.obyx?cs=honiton.html">http://china.camcoglobal.com/zh/chinacasestudyview.obyx?cs=honiton.html</a>
Ref.28.	Emission Factor calculation spreadsheet
Ref.29.	Evidence of 40 pieces of stakeholders survey questionnaires in February 2008.
Ref.30.	Official statistics on investment cost of wind power plants in China. <a href="http://www.newenergy.org.cn/html/0085/5100817371.html">http://www.newenergy.org.cn/html/0085/5100817371.html</a>
Ref.31.	The pricing of raw materials and fuels increase by 10.5% in China in 2008 vs 2007, issued by National Bureau of Statistics of China. <a href="http://www.stats.gov.cn/tjfx/jdfx/t20090122_402534140.htm">http://www.stats.gov.cn/tjfx/jdfx/t20090122_402534140.htm</a>
Ref.32.	PDD Version 2.1 dated 22/02/2010
Ref.33.	Document issued by NDRC on 09/06/2007, (Code: Fa Gai Jia Ge [2007] No. 1260) <a href="http://www.hebwj.gov.cn/upfiles/xy_col32gjc___20070718164220007126.htm">http://www.hebwj.gov.cn/upfiles/xy_col32gjc___20070718164220007126.htm</a>
Ref.34.	China Electricity Price executive report 2007 issued by State Electricity Regulatory Commission <a href="http://www.dianliz.com/article/20081030/3032_2.html">http://www.dianliz.com/article/20081030/3032_2.html</a>
Ref.35.	Document issued by NDRC on 03/12/2007, (Code Fa Gai Jia Ge [2007] No. 3303) <a href="http://www.ndrc.gov.cn/jggl/zcfg/t20080218_193008.htm">http://www.ndrc.gov.cn/jggl/zcfg/t20080218_193008.htm</a>
Ref.36.	Document issued by NDRC on 23/07/2008, (Code Fa Gai Jia Ge [2008] No. 1876) <a href="http://zfxgk.ndrc.gov.cn/PublicItemView.aspx?ItemID={3e2df87d-6532-4952-a109-d5a7de41daa1}">http://zfxgk.ndrc.gov.cn/PublicItemView.aspx?ItemID={3e2df87d-6532-4952-a109-d5a7de41daa1}</a>
Ref.37.	Notice on Perfecting the Feed-in Tariff Policy issued by NDRC on 20/07/2009 Code Fa Gai Jia Ge [2009] No. 1906 <a href="http://www.ndrc.gov.cn/jggl/jggs/t20090727_292846.htm">http://www.ndrc.gov.cn/jggl/jggs/t20090727_292846.htm</a>
Ref.38.	<a href="http://www.hailinagri.gov.cn/view.asp?id=1564">http://www.hailinagri.gov.cn/view.asp?id=1564</a>



Ref.39.	Opinions on Accelerating Domestic Wind Power Generation Technology (Guo Jing Mao Zi Yuan [2000]122) issued by State Economic and Trade Commission <a href="http://www.cnwp.org.cn/show.php?contentid=5763">http://www.cnwp.org.cn/show.php?contentid=5763</a>
Ref.40.	Temporary Measures of Additional Income regulation of Renewable Energy Power issued by NDRC on 11/01/2007, document code: Fa Gai Jia Ge [2007] No. 044)
Ref.41.	Interim Measures for Renewable Energy Power Tariff and Cost-sharing issued by NDRC issued by NDRC effective from 01/01/2006 (Document Code: Fa Gai Jia Ge [2006] No. 7) <a href="http://nyj.ndrc.gov.cn/zywx/W020060206507863382290.doc">http://nyj.ndrc.gov.cn/zywx/W020060206507863382290.doc</a>
Ref.42.	Notice for Stimulate Wind Power Development was issued by NDRC, (Fa Gai Jia Ge [2006]2535) <a href="http://cwera.cma.gov.cn/NewsCenter/NewsFile/Attach-20070216112443.pdf">http://cwera.cma.gov.cn/NewsCenter/NewsFile/Attach-20070216112443.pdf</a>
Ref.43.	Temporary Measures of Additional Income regulation of Renewable Energy Power issued by NDRC on 11/01/2007, document code: Fa Gai Jia Ge [2007] No. 044) <a href="http://www.nmgfgw.gov.cn/attachment/20081114145817.doc">http://www.nmgfgw.gov.cn/attachment/20081114145817.doc</a>
Ref.44.	China Wind Power Report 2008, published by China Renewable Energy Institute Association (CREIA) and WWF in October 2008 <a href="http://www.wwfchina.org/wwfpress/publication/climate/2008Chinawindpower.pdf">http://www.wwfchina.org/wwfpress/publication/climate/2008Chinawindpower.pdf</a>
Ref.45.	Tariff Notification issued by Inner Mongolia Development and Reform Commission dated 26/06/2004, document code: Nei Fa Gai Jia Ge [2004] No. 1093.
Ref.46.	<a href="http://www.cs.com.cn/ssgs/03/200904/t20090409_1814232.htm">http://www.cs.com.cn/ssgs/03/200904/t20090409_1814232.htm</a>
Ref.47.	Tariff Notification issued by National Development and Reform Commission (NDRC) dated 22/12/2006, document code: Fa Gai Jia Ge [2006] No. 2908, <a href="http://www.xlgl.gov.cn/ggfw/tzz/tscy/dian/200705/t20070525_11554.html">http://www.xlgl.gov.cn/ggfw/tzz/tscy/dian/200705/t20070525_11554.html</a>
Ref.48.	<a href="http://www.hailinagri.gov.cn/view.asp?id=1564">http://www.hailinagri.gov.cn/view.asp?id=1564</a>
Ref.49.	Opinions on Accelerating Domestic Wind Power Generation Technology (Guo Jing Mao Zi Yuan [2000]122) issued by State Economic and Trade Commission <a href="http://www.cnwp.org.cn/show.php?contentid=5763">http://www.cnwp.org.cn/show.php?contentid=5763</a>
Ref.50.	Temporary Measures of Additional Income regulation of Renewable Energy Power issued by NDRC on 11/01/2007, document code: Fa Gai Jia Ge [2007] No. 044)
Ref.51.	Interim Measures for Renewable Energy Power Tariff and Cost-sharing issued by NDRC issued by NDRC effective from 01/01/2006 (Document Code: Fa Gai Jia Ge [2006] No. 7) <a href="http://nyj.ndrc.gov.cn/zywx/W020060206507863382290.doc">http://nyj.ndrc.gov.cn/zywx/W020060206507863382290.doc</a>
Ref.52.	Notice for Stimulate Wind Power Development was issued by NDRC, (Fa Gai Jia Ge [2006]2535) <a href="http://cwera.cma.gov.cn/NewsCenter/NewsFile/Attach-20070216112443.pdf">http://cwera.cma.gov.cn/NewsCenter/NewsFile/Attach-20070216112443.pdf</a>
Ref.53.	Temporary Measures of Additional Income regulation of Renewable Energy Power issued by NDRC on 11/01/2007, document code: Fa Gai Jia Ge [2007] No. 044) <a href="http://www.nmgfgw.gov.cn/attachment/20081114145817.doc">http://www.nmgfgw.gov.cn/attachment/20081114145817.doc</a>
Ref.54.	Tariff Notification issued by Inner Mongolia Development and Reform Commission dated 26/06/2004, document code: Nei Fa Gai Jia Ge [2004] No. 1093.
Ref.55.	<a href="http://www.cs.com.cn/ssgs/03/200904/t20090409_1814232.htm">http://www.cs.com.cn/ssgs/03/200904/t20090409_1814232.htm</a>
Ref.56.	The tariff approval letter by Inner Mongolia DRC, dated 4 September 2009, Neifagaijiage [2009] 2406
Ref.57.	The tariff approval letter by Inner Mongolia DRC, Neifagaijiage [2009] 2406



### Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /1/ ACM0002 version 09 dated 27/02/2009
- /2/ Validation and Verification Manual Version 01 dated 28/11/2008 EB 44<sup>th</sup> Annex 3
- /3/ Tool to calculate the emission factor for an electricity system Version 01.1 dated 29/07/2008
- /4/ Tool for demonstration and assessment of additionality Version 05.2 dated 26/08/2008
- /5/ Guidance on the demonstration and assessment of prior consideration of the CDM Version01 (Annex 46, EB 41<sup>st</sup> )
- /6/ Paragraph 54 of EB 38<sup>th</sup> dated 14/03/2008.
- /7/ Glossary of CDM terms Version.04.and paragraph 67 of EB 41<sup>st</sup>

### Persons interviewed:

List persons interviewed during the validation or persons that contributed with other information that are not included in the documents listed above.

- /1/ Mr. Zhao Jingjing, Manager of Contract & Law Dept. CGN Wind Power Co., Ltd.
- /2/ Ms. Ran Dan, Manager of Planning Dept. CGN Wind Power Co., Ltd.
- /3/ Mr. Wu Jinshan, Representative of villagers of Wulate Hou Qi
- /4/ Ms. Ba Genna, Representative of villagers Wulate Hou Qi
- /5/ Mr. Shi Xiangfeng, Technical Manager of Carbon Resource Management Ltd.
- /6/ Ms. Zhu Qiyan Project Manager of Carbon Resource Management Ltd.

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## 7 CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Mr.Liao Ling	Bureau Veritas Certification, China	<p>Team Leader, CDM Verifier.</p> <p>He holds a Bachelor Degree in Atmosphere Science. He was involved in approximate 20 CDM projects in P.R China. He has undergone intensive trainings on the Clean Development Mechanism and EMS ISO14000 in Bureau Veritas.</p>
Mr.Zeng Ziyuan	Bureau Veritas Certification, China	<p>Team Member, CDM Verifier</p> <p>He holds a bachelor degree in Building Environment and Facility Engineering. He has 2 years of environmental Software and Building Automation engineering experience. He has undergone intensive trainings on the Clean Development Mechanism and EMS ISO14000 in Bureau Veritas.</p>
Mr. (Robin) Wang Jing	Bureau Veritas Certification, China	<p>Internal Reviewer, CDM Lead Verifier.</p> <p>He has total experience of twelve years and has worked in energy sector in oil or gas companies in PR China. He obtained the certificate of CDM Lead Verifier and Lead Auditor for EMS ISO14000. He was involved in approximate 50 CDM projects in PR China.</p>
Mr. H B Muralidhar	Bureau Veritas Certification India Private Limited	<p>Internal Reviewer, CDM Lead Verifier</p> <p>BE (Electrical) graduate. Total of 25 years of experience power generation and distribution related fields as well as in management system auditing. He has been involved in validation of more than 80 CDM projects.</p>

## APPENDIX A: CDM PROJECT VALIDATION PROTOCOL

## VALIDATION PROTOCOL

Table 1 Validation requirements based on the Validation and Verification Manual (EB44 Annex 3)

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl.	Final Concl.
<b>1. Approval</b>			<i>COUNTRY A (China)</i>	<i>COUNTRY B (UK)</i>		
1.A. Have all Parties involved approved the project activity?	VVM	44	Not yet been presented CAR-1	Not yet been presented CAR-2	<del>CAR-1</del> <del>CAR-2</del>	OK
1.B. Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD provided a written letter of approval? (If yes, provide the reference of the letter of approval, any supporting documentation, and specify if the letter was received from the project participatn or directly from the DNA)	VVM	45	CAR-1	CAR-2	Pending	OK
1.C. Does the letter of approval from DNA of each Party involved:	VVM	45				
i. confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	P. R. China has ratified the Kyoto Protocol on 30/08/2002,	United Kingdom of Great Britain and Northern Ireland has ratified the Kyoto	OK	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl.	Final Concl.
				Protocol on 31/05/2002		
ii. confirm that participation is voluntary?	VVM	45.b	Pending close CAR-1	Pending close CAR-2	Pending	OK
iii. confirm that, in the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country?	VVM	45.c	Pending close CAR-1	Pending close CAR-2	Pending	OK
iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	Pending close CAR-1	Pending close CAR-2	Pending	OK
1.D. Is(are) the letter(s) of approval unconditional with respect to (i) to (iv) above?	VVM	46	No. It is conditional in China	No. It is conditional in United Kingdom	OK	OK
1.E. Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA)?	VVM	47	China's DNA is NDRC	UK's DNA is State of Environmental, Food and Rural Affaires.	OK	OK
1.F. If there is doubt with respect to (e) above, was verified with the DNA that the letter of approval is valid for the proposed CDM project activity under validation?	VVM	47	Pending close CAR-1	Pending close CAR-2	Pending	OK
<b>2. Participation</b>			<i>PP1 (insert PP1 name)</i>	<i>PP2 (insert PP2 name)</i>		
2.A. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	Pending close CAR-1	Pending close CAR-2	Pending	OK
2.B. Has the participation of the project participants in the project activity been approved by a Party to the Kyoto Protocol?	VVM	51	Yes. Refer to <a href="http://maindb.unfccc.int/public/country.pl?country=CN">http://maindb.unfccc.int/public/country.pl?country=CN</a>	Yes. Refer to <a href="http://maindb.unfccc.int/public/country.pl?country=GB">http://maindb.unfccc.int/public/country.pl?country=GB</a>	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl.	Final Concl.
2.C. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	Yes	Yes	OK	OK
2.D. Is the information in section A.3 consistent with the contact details provided in Annex 1 of the PDD?	VVM	52	Yes	Yes	OK	OK
2.E. Has the participation of each of the project participants been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation? (Provide reference of the approval document for each of the project participants)	VVM	52	Pending close CAR-1	Pending close CAR-2	Pending	OK
2.F. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	No.		OK	OK
2.G. Has the approval of participation issued from the relevant DNA?	VVM	53	Pending close CAR-1	Pending close CAR-2	Pending	OK
<b>3. Project desing document</b>						
3.A. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website?	VVM	55	Yes. Latest Version 03.2. per the GUIDELINES FOR COMPLETING CDM-PDD, CDM-NMB and CDM-NMM – Version 07 – 2 Aug, 2008		OK	OK
3.B. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	Yes		OK	OK
3.C. In CDM-PDD section A.1 are the following provided?	EB 41	Ann 12	Yes			
i. Title of project	EB	Ann	Yes.		OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
	41	12	Inner Mongolia Wuliji Wind Farm Project		
ii. Current version number and date of document	EB 41	Ann 12	Yes. Version number: 1.1, dated 17/09/2008 Version number: 2 dated 26/03/2009 Final version number: 2.1 dated 22/02/2010	OK	OK
3.D. In CDM-PDD section <b>A.2</b> are following provided (max. one page)?	EB 41	Ann 12			
i. A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, present scenario and baseline scenario	EB 41 - VVM	Ann 12 - 58 59 60	Yes The proposed CDM project activity is a newly – built large scale wind farm project. The Project involves the installation of 33 wind turbines of 1.5MW, which amount to a total capacity of 49.5MW. However, the model of WTG was changed to 1.25MW with total capacity of 50MW after the PDD submitted for public comments.	<del>CAR-3</del>	OK
ii. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	No. It is a newly –built project.	OK	OK
iii. Explanation on how the GHG emission reductions are effected	EB 41	Ann 12	Yes. To utilize the wind power for power generation which will be delivered to the North China Power Grid (NCPG) and displace the power from thermal power plants.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
iv. The PP's vies on the contribution of project activity to sustainable development	EB 41	Ann 12	Yes. The contribution to sustainable development included in Section A.2 of the PDD has been checked against the approved FSR.	OK	OK
3.E. In CDM-PDD section <b>A.3</b> are following provided in the tabular format?	EB 41	Ann 12			
i. List of project participants and parties	EB 41	Ann 12	Yes. The private entities involved in the project activity are listed at section A.3 of the PDD. Host Country-China – CGN Wind Power Co.,Ltd. Annex I Country- United Kingdom –Carbon Resources Management Ltd.	OK	OK
ii. Identification of Host Party			Yes. P.R. China	OK	OK
iii. Indication whethre the Party wishes to be considered as project participant	EB 41	Ann 12	Yes. Not considered as PP.	OK	OK
3.F. In CDM-PDD section <b>A.4.1</b> are following provided?	EB 41	Ann 12			
i. Technical description, location, host party(ies) and address as required	EB 41	Ann 12	Yes. Wulate Hou Qi, Bayannao'er City, Inner Mongolia Autonomous Region, P.R.China. The turbines (model-SEC1250) are made by a	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
			domestic manufacture-Shanghai Electric Wind Power		
ii. Detailed physical location with unique identification of the project activity (eg. Longitude/latitude) – not to exceed one page	EB 41	Ann 12	Yes. The geographical coordinates is N41°30'20" E106°38'30".	OK	OK
3.G. In CDM-PDD section A.4.2 is the list of categories of project activities provided?	EB 41	Ann 12	Scope 1: Energy Industries (renewable sources)	OK	OK
3.H. In CDM-PDD section A.4.3 are following provided?	EB 41	Ann 12			
i. A description of how environmentally safe and sound technology, and know-how, is transferred to the Host Party(ies)	EB 41	Ann 12	Yes. The technology reflects the current good practice in the host country. The WTG is manufactured by a domestic manufacturer which ranked at top 5 in China wind power sector.	OK	OK
ii. Explanation of purpose of project activity with scenario existing prior to the start of project, scope or present activities and the baseline scenario	EB 41	Ann 12	The project is a newly built wind farm.	OK	OK
iii. List and arrangement of the main manufacturing/production technologies, systems and equipments involved	EB 41	Ann 12	Yes. Refer the specification listed in A.4.3.	OK	OK
iv. The emissions sources and GHGs involved	EB 41	Ann 12	Yes. To reduce greenhouse gas emissions of CO <sub>2</sub> produced in NCPG.	OK	OK
3.I. In CDM-PDD section A.4.4 is the estimation of	EB	Ann	7×3 renewable crediting periods chosen;	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
emission reductions provided as requested in a tabular format?	41	12	Annual emission reduction of 128,100tCO <sub>2</sub> e (later changed to 124,076) is estimated for the first crediting period;		
3.J. In CDM-PDD section A.4.5 is Information regarding Public funding provided?	EB 41	Ann 12	Yes.  No public founding involved confirmed with the approved FSR	OK	OK
3.K. In CDM-PDD section B.1 are following provided?	EB 41	Ann 12			
i. The approved methodology and version number	EB 41	Ann 12	Yes. ACM0002 ver.07 (changed to ver.09 in the PDD ver. 2.0 submitted for registration)  <i>"Consolidated methodology for grid-connected electricity generation from renewable sources"</i>	OK	OK
ii. Any methodologies or tools which the above approved methodology draws upon and their version number	EB 41	Ann 12	Yes.  <i>"Tool for the Demonstration and Assessment of Additionality ver. 05.2" and</i>  <i>"Tool to calculate the emission factor for an electricity system ver. 01.1"</i>	OK	OK
3.L. In CDM-PDD section B.2 is justification of the choice of methodology that the project activity meets each of the applicability conditions provided?	EB 41	Ann 12	Yes	OK	OK
3.M. In CDM-PDD section B.3 are following provided?	EB 41	Ann 12			
i. Description of all sources and gases included in	EB	Ann	Yes.	OK	OK



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
the project boundary in the table	41	12	Only emission of CO <sub>2</sub> is considered in baseline emission.		
ii. A flow diagram of the project boundary physically delineating the project activity	EB 41	Ann 12	Not illuminated in PDD B.3.	OK	OK
iii. The flow diagram with all equipments, systems and flows of mass and energy etc	EB 41	Ann 12	Yes	OK	OK
3.N. In CDM-PDD section <b>B.4</b> are following provided?	EB 41	Ann 12			
i. Explanation how the most plausible baseline scenario is identified in accordance with the selected baseline methodology	EB 41	Ann 12	Not applicable, as methodology ACM0002 prescribes the baseline scenario and no further analysis required, therefore, there is no need to take steps to identify the baseline scenarios.	OK	OK
ii. Justification of key assumptions and rationales	EB 41	Ann 12	Not applicable.	OK	OK
3.O. In CDM-PDD section <b>B.5</b> are following provided?	EB 41	Ann 12			
i. Explanation of how and why this project activity is additional and therefore not the baseline scenario in accordance with the selected baseline methodology	EB 41	Ann 12	Yes. Investment analysis used for demonstration of the additionality.	OK	OK
ii. Justification of key assumptions and rationales	EB 41	Ann 12	Yes.	OK	OK
iii. Transparent illustration of all data used to determine the baseline scenario (variables,	EB 41	Ann 12	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
parameters, data sources etc)			See PDD B.5, Step 2.		
iv. Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation	EB 41	Ann 12	Yes, in PDD B.5.  The evidences of PP's formal investment decision in CDM development is required to be presented.  The start date of the Project is identified before the date of validation.	CL-1	OK
3.P. In CDM-PDD section <b>B.6.1</b> are following provided?	EB 41	Ann 12			
i. Explanation as to how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity	EB 41	Ann 12	Complying with ACM0002, the " <i>Tool to calculate the emission factor for an electricity system</i> " ver. 01.1 is used. (referred to as " <b>Tool-Grid EF</b> " in the report)	OK	OK
ii. Equations used in calculating emission reductions	EB 41	Ann 12	The equations of " <i>Tool-Grid EF</i> " are used.	OK	OK
iii. Explanation and justification for all relevant methodological choices, including different scenarios or cases, options and default values	EB 41	Ann 12	The official data of Chinese power grid issued by NDRC annually are used. (referred to as " <b>Notification of China Grid EF</b> " in the report)	OK	OK
3.Q. In CDM-PDD section <b>B.6.2</b> are following provided?	EB 41	Ann 12			
i. A compilation of information on the data and parameters that are not monitored throughout the crediting period but that are determined only once	EB 41	Ann 12	Yes.  Complying with " <i>Tool-Grid EF</i> ", the necessary	OK	OK

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and thus remains fixed throughout the crediting period AND that are available when validation is undertaken			official data of power grid made publically by NDRC are available and determined during validation.		
ii. Explanation and justification for the choice of the source of data	EB 41	Ann 12	The official data i.e. <b>Notification of China Grid EF</b> were based on the data of China Energy Statistical Yearbook and China Power Yearbook, and authorities' expertise.	OK	OK
iii. Clear and transparent references or additional documentation in Annex 3	EB 41	Ann 12	Yes.	OK	OK
iv. Where values have been measured, a description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results	EB 41	Ann 12	It is not applicable in this case as the emission factor is determined ex-ante as per the options in ACM0002	OK	OK
3.R. In CDM-PDD section <b>B.6.3</b> are following provided?	EB 41	Ann 12			
i. A transparent <i>ex ante</i> calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology	EB 41	Ann 12	Yes. The calculation process is in line with the steps taken prescribed in "Tool-Grid EF" and addressed in PDD B.6.3 and Annex 3.	OK	OK
ii. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 41	Ann 12	Yes. The spreadsheets are used.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
iii. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 41	Ann 12	Yes. The calculation spreadsheet has been presented for re-produce.	OK	OK
3.S. In CDM-PDD section <b>B.6.4</b> are the results of the <i>ex ante</i> estimation of emission reductions for all years of the crediting period, provided in a tabular format?	EB 41	Ann 12	Yes. From 2010 to 2016 with year-wise data of emission reductions.	OK	OK
3.T. In CDM-PDD section <b>B.7.1</b> are following provided?	EB 41	Ann 12			
i. Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 41	Ann 12	Yes. EG y-net electricity supplied to NCPG	OK	OK
ii. For each parameter the following below information, using the table provided:	EB 41	Ann 12			
a. The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). Where several sources may be used, explain and justify which data sources should be preferred.	EB 41	Ann 12	N/A No other outside source(s) of data should be used.	OK	OK
b. Where data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied,	EB 41	Ann 12	Monitoring equipments includes two meters. The Check meter is equipped at the project site and to be monitored by project owner. The Main meter (revenue meter) is at the grid's	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment. Provide any relevant further background documentation in Annex 4.			substation and to be monitored by grid company itself.  The accuracy class both of the above two meters is 0.5s.  The measurement interval is on hourly basis.		
3.U. In CDM-PDD section <b>B.7.2</b> are following provided?	EB 41	Ann 12			
i. A detailed description of the monitoring plan	EB 41	Ann 12	Yes.  The relevant details are addressed.	OK	OK
ii. The operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity	EB 41	Ann 12	Yes.  No project emission and leakage need to be considered as per ACM0002	OK	OK
iii. The responsibilities for and institutional arrangements for data collection and archiving	EB 41	Ann 12	Yes.  The structure covered from general management to meters recorder.	OK	OK
iv. Indication that the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 41	Ann 12	Yes  Widely applied in power sector.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
v. Relevant further background information in Annex 4	EB 41	Ann 12	Not addressed separately. Same to PDD Section B.7.2	OK	OK
3.V. In CDM-PDD section <b>B.8</b> are following provided?	EB 41	Ann 12	Yes		
i. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 41	Ann 12	Yes On 17/09/2008.  Changed to 26/03/2009 in the PDD ver.02 submitted for registration as the ACM0002 used in the PDD updated to ver.09.	OK	OK
ii. Contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity	EB 41	Ann 12	Yes. Carbon Resource Management Ltd. registered in United Kingdom.	OK	OK
iii. Indication if the person/entity is also a project participant listed in Annex 1	EB 41	Ann 12	Yes. The person/entity is the project participant	OK	OK
3.W. In CDM-PDD section <b>C.1.1</b> are following provided?	EB 41	Ann 12			
i. The starting date of a CDM project activity, which is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun (EB33, Para 76/CDM Glossary of terms/EB41, Para 67)	EB 41	Ann 12	Yes. 28/07/2008  Pending on-site assessment	Pending	OK
ii. A description of how this start date has been determined, and a description of the evidence	EB 41	Ann 12	The date of signing the wind turbine purchasing contract with WTG supplier.	OK	OK



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
available to support this start date			Pending on-site assessment		
iii. If this starting date is earlier than the date of publication of the CDM-PDD for global stakeholder consultation by a DOE, description in Section B.5 contain a of how the benefits of the CDM were seriously considered prior to the starting date (EB41, Para 67).	EB 41	Ann 12	Yes. Addressed with a timeline in PDD-B.5.	OK	OK
3.X. In CDM-PDD section C.1.2 is the expected operational lifetime of the project activity in years and months provided?	EB 41	Ann 12	Yes. 20 years.	OK	OK
3.Y. In CDM-PDD section C.2 is it stated whether the project activity will use a renewable or a fixed crediting period and is C.2.1 or C.2.2 completed accordingly?	EB 41	Ann 12			
3.Z. In CDM-PDD section C.2.1 is it indicated that each crediting period shall be at most 7 years and may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the Executive Board that the original project baseline is still valid or has been updated taking account of new data where applicable?	EB 41	Ann 12	Yes. 3x7 years This baseline determination is for the first 7 years.	OK	OK
3.AA. In CDM-PDD section C.2.1.1 are dates in the following format: (DD/MM/YYYY) provided?	EB 41	Ann 12	Yes. 15/03/2010 in the PDD ver.2.1	OK	OK
3.BB. In CDM-PDD section C.2.1.2 is the length of the first crediting period in years and months	EB 41	Ann 12	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
provided?			7 y and 0 m		
3.CC. In CDM-PDD section C.2.2 is the fixed crediting period at most ten (10) years provided?	EB 41	Ann 12	N/A.		
3.DD. In CDM-PDD section C.2.2.1 are the dates provided in the following format: (DD/MM/YYYY)?	EB 41	Ann 12	N/A.		
3.EE. In CDM-PDD section C.2.2.2 is the length of the crediting period in years and months Provided?	EB 41	Ann 12	N/A.		
3.FF. In CDM-PDD section D.2 are the conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the Host Party, if environmental impacts are considered significant by the project participants or the Host, provided?	EB 41	Ann 12	The conclusion stated. The support documentation is required during on-site assessment.	Pending	OK
3.GG. In CDM-PDD section E.1 are the following provided?	EB 41	Ann 12			
i. The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted.	EB 41	Ann 12	Yes. Target group-local farmers, workers and government officials were interviewed;	OK	OK
ii. The project activity is described in a manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality	EB 41	Ann 12	Yes. By distributing questionnaires	OK	OK

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provisions of the CDM modalities and procedures.					
iii. The local stakeholder process has been completed before submitting the proposed project activity to the DOE for validation.	EB 41	Ann 12	Yes Completed in February 2008	OK	OK
3.HH. In CDM-PDD section E.2 are following provided?	EB 41	Ann 12			
i. Identification of local stakeholders that have made comments	EB 41	Ann 12	Yes. It covers local farmers, workers and government officials were interviewed;	OK	OK
ii. A summary of this comments.	EB 41	Ann 12	Yes. See PDD-E.2	OK	OK
3.II. In CDM-PDD section E.3 is the explanation of how due account have been taken of comments received from local stakeholders provided?	EB 41	Ann 12	Yes. The measures in noise, waste water are to be taken.	OK	OK
3.JJ. In CDM-PDD <b>Annex 1</b> are the following provided?	EB 41	Ann 12			
i. Contact information of project participants	EB 41	Ann 12	Yes.	OK	OK
ii. For each organisation listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail	EB 41	Ann 12	Yes.	OK	OK
3.KK. In CDM-PDD <b>Annex 2</b> is information from Parties included in Annex I on sources of public	EB	Ann	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided?	41	12			
3.LL. In CDM-PDD <b>Annex 3</b> is the background information used in the application of the baseline methodology provided?	EB 41	Ann 12	Yes.	OK	OK
3.MM. In CDM-PDD <b>Annex 4</b> is the background information used in the application of the monitoring methodology provided?	EB 41	Ann 12	No. Refer to PDD-B.7.2.	OK	OK
<b>4. Baseline and monitoring methodology</b>					
<b>4.A. General requirement</b>					
4.A.a Is the baseline and monitoring methodologies selected by the project participants previously approved by the CDM Executive Board?	VVM	65	Refer to (4.B.a) below	OK	OK
4.A.b Is the selected methodology applicable to the project activity?	VVM	66	Refer to (4.B.b) below	OK	OK
4.A.c Had the selected methodology been correctly applied?	VVM	66	Refer to (4.B.c) below	OK	OK
4.A.d Had the selected methodology been correctly applied with respect to project boundary?	VVM	67	Refer to (4.B) below	OK	OK
4.A.e Had the selected methodology been correctly applied with respect to baseline identification?	VVM	67	Refer to (4.B) below	OK	OK
4.A.f Had the selected methodology been correctly applied with respect to Algorithms and/or formulae	VVM	67	Refer to (4.E) below	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
used to determine emission reductions?					
4.A.g Had the selected methodology been correctly applied with respect to additionality?	VVM	67	Yes.	OK	OK
<b>4.B. <i>Applicability of the selected methodology to the project activity</i></b>					
4.B.a. Is the selected baseline and monitoring methodology, previously approved by the CDM Executive Board, applicable to the project activity?	VVM	68	Yes. ACM0002 ver. 09 Valid from 27/02/2009 onward.	OK	OK
4.B.b. Is the methodology correctly quoted?	VVM	69	Yes.  The Project fulfills the criteria of ACM0002 ver.09 - utilization of wind sources; - not involving switching from fossil fuels to renewable energy at project site; - the geographic and system boundaries of NCPG can be clearly identified and the information of this grid is available.	OK	OK
4.B.c. Are the applicability conditions of the methodology met?	VVM	70	Yes.	OK	OK
4.B.d. Is the proeject activity expected to result in emissions other than those allowed by the methodology?	VVM	70	No other emissions other than CO <sub>2</sub> are identified.	OK	OK
4.B.e. Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD?	VVM	70	Yes.  Public information has been checked and found the consistency.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
			<a href="http://data.6jc.cn/2008-6/200861482734.html">http://data.6jc.cn/2008-6/200861482734.html</a>		
4.B.f. If yes, was the PDD cross checked against the other sources to confirm that the project activity meets the applicability conditions of the methodology? (provide the reference to these choices)	VVM	70	Yes. The same project information is found.	OK	OK
4.B.g. Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made?	VVM	71	Yes.	OK	OK
4.B.h. If no, clarification of the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	71	N/A	OK	OK
4.B.i. If answer to (4.B.c) above is "no", revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	N/A	OK	OK
<b>4.C. Project boundary</b>					
4.C.a. Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?	VVM	77	Yes. The project boundary is clearly identified that includes the physical, geographical site of the project activity and all the power plants connected physically to the North China Power Grid. And all emission sources and GHGs have been included in the project boundary. The project site includes total 33 sets of turbines with a unit capacity of 1.5MW, later on changed to 40	OK	OK



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			sets of 1.25MW, step-up substations and auxiliary facilities that are used to support the turbines operation.		
4.C.b. Is the delineation in the PDD of the project boundary correct?	VVM	78	Yes, confirmed by cross-checking with official boundary definitions published by the China's DNA on 18/07/2008 prior to the validation. <a href="http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/2008/200887164119674.pdf">http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/2008/200887164119674.pdf</a>	OK	OK
4.C.c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	78	Yes. Clearly identified.	OK	OK
4.C.d. Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	78	Yes. For wind power projects only CO <sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity.	OK	OK
4.C.e. Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary?	VVM	78	Not applicable	OK	OK
4.C.f. If yes, have the project participants justified that choice?	VVM	78	Not applicable	OK	OK
4.C.g. If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	78	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
<b>4.D. Baseline identification</b>					
4.D.a. Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?	VVM	80	Yes.  The baseline scenario was clearly identified in PDD B.4. in accordance with ACM0002 ver. 07 (and also ver.09) that it is “provision of an equivalent amount of annual power output by the NCPG”.	OK	OK
4.D.b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	81	Not applicable, as methodology ACM0002 prescribes the baseline scenario and no further analysis required, therefore, there is no need to take steps to identify the baseline scenarios.	OK	OK
4.D.c. Does the selected methodology require use of tools (such as the “Tool for the demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality”) to establish the baseline scenario?	VVM	81	No.	OK	OK
4.D.d. If yes, was the methodology consulted on the application of these tools? (In such cases, the guidance in the methodology shall supersede the tool.)	VVM	81	N/A	OK	OK
4.D.e. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	82	No.  Refer to (4.D.b) above	OK	OK
4.D.f. If yes, are all scenarios that are considered	VVM	82	N/A.	OK	OK

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by the project participants and are supplementary to those required by the methodology reasonable in the context of the proposed CDM project activity?					
4.D.g. Has any unreasonable alternative scenario been excluded?	VVM	82	N/A .Refer to (4.D.b) above	OK	OK
4.D.h. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	83	Yes. The supporting documents are derived from public data sources made by governments.	OK	OK
4.D.i. Was the information provided in the PDD cross checked with other verifiable and credible sources, such as local expert opinion, if available? (identify the sources)	VVM	83	Yes. Cross-checked with sectoral information that publically available since the year the Project implemented.	OK	OK
4.D.j. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	84	Refer to 5.D.g. above	OK	OK
4.D.k. Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	84	Refer to 5.D.g. above	OK	OK
4.D.l. Does the PDD provide a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity?	VVM	85	Yes. It is identified in the PDD B.4 that " <i>As a result of the above discussion, electricity supply of equal amount as the proposed project from the NCPG is selected as the baseline for the proposed project.</i> "	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
<b>4.E. Algorithms and/or formulae used to determine emission reductions</b>					
4.E.a. Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring?	VVM	88	Yes. Tool to calculate the emission factor for an electricity system are required to be used by ACM0002.	OK	OK
4.E.b. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	89	The steps and equations applied are consistent with the Tool and ACM0002.	OK	OK
4.E.c. Does the methodology provide for selection between different options for equations or parameters?	VVM	89	Yes. Options in Step 1,2 and 3. are used for OM factor determination	OK	OK
4.E.d. If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity and other evidence provided)?	VVM	89	Yes. The relevant justifications in Step 1,2 and 3.	OK	OK
4.E.e. If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	89	Yes.	OK	OK
4.E.f. Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	90	Not applicable as the emission factor is determined ex ante for the Project.	OK	OK
4.E.g. If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	90			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
i. Appropriate and correct?	VVM	90	The data issued by China's DNA. However, the web link stated in PDD is not correct. As mentioned in the step 3 of "Tool to calculate the emission factor for an electricity system", option C should only be used if only nuclear and renewable power generation are considered as low-cost/must-run power sources and if the quantity of electricity supplied to the grid by these sources is known. However, PDD is silent about it.	<del>CAR-4</del>  CL-2	OK
ii. Applicable to the proposed CDM project activity?	VVM	90	Yes.	OK	OK
iii. Resulting in a conservative estimate of the emission reductions?	VVM	90	Yes.	OK	OK
4.E.h. Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?	VVM	90	Not applicable	OK	OK
4.E.i. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	90	Not applicable	OK	OK
<b>5. Additionality of a project activity</b>					
5.a. Does the PDD describe how a proposed CDM project activity is additional?	VVM	93	Pending close out all Findings in this section.	Pending	OK
5.b. Does the CDM-PDD state the latest version of the additionality tool being used?	VVM	94	Yes.  The approved "Tool for the Demonstration and Assessment of Additionality" version 05.2 is	OK	OK

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			used.		
5.c. Were the steps taken of the “Tool for the Demonstration and Assessment of Additionality” to assess additionality used:	EB 39	Ann 10	Yes. Step 1-identification of alternatives of the project activity, Step 2-Investment analysis (Step 3 -Barrier analysis was not used) Step 4-common practice analysis While	OK	OK
i. Identification of alternatives to the project activity? (Step 1)	EB 39	Ann 10	Yes, all plausible and credible alternative scenarios have been identified in the PDD, including: <u>Alternative a:</u> The project activity undertaken without being registered as a CDM project activity; <u>Alternative b:</u> Construction of a coal-fired power plant with equivalent installed capacity or annual electricity generation; <u>Alternative c:</u> Construction of a power plant using other sources of renewable energy with equivalent installed capacity or annual electricity generation; <u>Alternative d:</u> Continuation of the current situation: Electricity delivered to the grid into which the Project is connected. Alternative c is excluded due to lack of hydro	OK	OK



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			and geothermal resources on/around project site, and the financial less attractiveness of biomass and solar PV power generation technologies.		
ii. Investment analysis to determine that the proposed project activity is either: (1) not the most economically or financially attractive, or (2) not economically or financially feasible? (Step 2)	EB 39	Ann 10	Yes, (2) is used.  The appropriate analysis method is clearly discussed and determined in the PDD.  Option III (benchmark analysis) is chosen for investment analysis.	OK	OK
iii. Barriers analysis?	EB 39	Ann 10	Not used.	OK	OK
iv. Common practice analysis?	EB 39	Ann 10	Yes.  The Project is located in Inner Mongolia Autonomous Region. As projects of same type developed within the same region face a similar regulatory framework that makes them comparable. Therefore, activities similar to the Project should be wind farm located in Inner Mongolia Autonomous Region.	OK	OK
5.d. In step 1 (i) have all the sub-steps as below been followed?	EB 39	Ann 10	Yes.	OK	OK
i. Sub-step 1a: Define alternatives to the project activity	EB 39	Ann 10	Yes.	OK	OK

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ii. Sub-step 1b: Consistency with mandatory laws and regulations	EB 39	Ann 10	Yes.	OK	OK
5.e. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 39	Ann 10	Yes.	OK	OK
i. (a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 39	Ann 10	Yes. Refer to 5.c.i. above.	OK	OK
ii. (b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology;	EB 39	Ann 10	Yes. Refer to 5.c.i. above.	OK	OK
iii. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	Yes. Refer to 5.c.i. above.	OK	OK
5.f. Has the outcome of <b>Step 1a</b> : Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 39	Ann 10	Yes. Alternative c) is not a feasible alternative as per local geographical and /or economical environment.	OK	OK
5.g. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to	EB 39	Ann 10	Yes. Alternative b) is strictly regulated for installation per the current regulations in China i.e. footer 7	OK	OK

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mitigate local air pollution.?			of the PDD: <i>Notice on Strictly Controlling the Manufacturing and Construction of Small-scale Fuel-fired Generators</i> , Ref. No.[Jijiqing (1995) 2372]. Consequently, alternative 2) is excluded.		
5.h. If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the country?	EB 39	Ann 10	Yes.  Alternative b) Construction of a fossil fuel power plant with equivalent amount of annual electricity output; is enforced and generally that noncompliance with those requirements is not appeared in the country.	OK	OK
5.i. Has the outcome of <b>Step 1b</b> : Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	EB 39	Ann 10	Yes.  Alternative b) is not consistent with mandatory laws and regulations	OK	OK
5.j. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 39	Ann 10	Yes.	OK	OK
5.k. In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10	Yes.	OK	OK
i. Sub-step 2a: Determine appropriate analysis method;	EB 39	Ann 10	Yes.  The three analysis methods suggested by Tools	OK	OK

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			for the demonstration and assessment of additionality are simple cost analysis (Option I), investment comparison analysis (Option II) and benchmark analysis (Option III)		
ii. Sub-step 2b: Option I. Apply simple cost analysis;	EB 39	Ann 10	No. It is considered not applicable to the Project	OK	OK
iii. Sub-step 2b: Option II. Apply investment comparison analysis;	EB 39	Ann 10	No. It is considered not applicable to the Project	OK	OK
iv. Sub-step 2b: Option III. Apply benchmark analysis;	EB 39	Ann 10	Yes. The benchmark analysis method based on Project IRR is chosen.	OK	OK
v. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 39	Ann 10	Yes.	OK	OK
vi. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 39	Ann 10	Yes.	OK	OK
5.I. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below?	EB 39	Ann 10	Yes.	OK	OK
i. Simple cost analysis if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I).	EB 39	Ann 10	Yes. Excluded as the proposed project will earn revenues from not only the CDM but also the electricity output.	OK	OK

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ii. Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 39	Ann 10	Yes.  The baseline scenario of the Project is to supply equivalent annual power output from the Grid rather than a new investment project. Thus the Option III is chosen.	OK	OK
5.m. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	EB 39	Ann 10	Not applicable.		
5.n. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify	EB 39	Ann 10	Not applicable.		
5.o. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 39	Ann 10		OK	OK
i. Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 39	Ann 10	Yes.  project IRR used	OK	OK
ii. When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the	EB 39	Ann 10	Yes.	OK	OK

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project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.					
iii. Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project	EB 39	Ann 10	Yes. Derived from (d)  With reference to <i>Interim Rules on Economic Assessment of Electric Engineering Retrofit Projects</i> , the financial benchmark IRR of Chinese power industry is 8% on Project (after tax), which has been used widely in feasibility studies of new power plants, including wind power projects in China.	OK	OK



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participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.					
5.p. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III)?	EB 39	Ann 10	Yes.	OK	OK
i. Calculate the suitable financial indicator for the proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.	EB 39	Ann 10	Yes.	OK	OK
ii. Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the CDM-PDD.	EB 39	Ann 10	Yes. IRR sheet is provided	OK	OK
iii. Justify and/or cite assumptions.	EB 39	Ann 10	Yes. All input values including two model options i.e.1.5MWx33 sets and 1.25MWx 40 sets are taken from the approved FSR	OK	OK

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iv. In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions.	EB 39	Ann 10	Yes. Relevant costs are included.	OK	OK
v. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 39	Ann 10	Not applicable as Option III is used.	OK	OK
vi. Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity. Please specify details for above.	EB 39	Ann 10	Yes. 5.35% VS benchmark of 8%	OK	OK
5.q. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)? Include a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.	EB 39	Ann 10	Yes. Four financial parameters, i.e. Total investment, Annual O&M cost, Tariff and Power generation, are chosen for sensitive analysis with variation range of 10%.	OK	OK
5.r. Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	Yes. The Project remains financially unacceptable without CDM support	OK	OK
5.s. In step 4: Common practise analysis have all the sub-steps as below followed?	EB 39	Ann 10		OK	OK
i. Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 39	Ann 10	Yes. Dali Phase III Wind Farm Project with 31.2MW capacity built in 2004 and	OK	OK

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			Da Mao Qi Bailingmiao windfarm project with 35MW built in 2008 is identified for analysis.		
ii. Sub-step 4b: Discuss any similar Options that are occurring.	EB 39	Ann 10	Yes.	OK	OK
5.t. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity? Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.	EB 39	Ann 10	Yes.  The Criteria used is that:  Technology or industry type: wind farms;  Geographical scope: in Inner Mongolia Autonomous Region ;  Capacity / scale: with installed capacity between 30MW to 60MW ;  Period: of time: has been put into operation since 2002 without CDM support is applied in the PDD.  However, the range of capacity is not identified appropriately.	CL-3	OK
5.u. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and	EB 39	Ann 10	Yes.  Dali Phase III Wind Farm Project is a demonstration project and is supported by national debt fund.  Da Mao Qi Bailingmiao wind farm invested by foreign investors, has been validated as a VER project under Golden Standard program. Supporting data sources as quoted in the PDD is	OK	OK

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explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.			verified reliable.		
5.v. Has the outcome from Step 4 clearly mentioned in PDD?	EB 39	Ann 10	Yes.  The Project is not common practice within the region	OK	OK
5.w. Has it been proved that the project is additional?	EB 39	Ann 10	Yes.	OK	OK
<b>5.A. Prior consideration of the clean development mechanism</b>					
5.A.a. Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	96	Yes.  The start date defined as 28/07/2008 prior to 15/10/2008 the validation commissioned.	OK	OK
5.A.b. If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	96	Yes.  Additional support from CDM was suggested in the FSR to make the Project to be financial attractive.  The supporting evidences including		

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			I. the relevant description in the approved FSR II. the signed WTG contracts with SEC. However, the contract of construction signed with the contractor is not provided.	CL-4	OK
5.A.c. Is the start date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins."?	VVM	97	Yes. The date WTG purchasing contract signed with the supplier is defined appropriately complying with the Glossary.	OK	OK
5.A.d. Does the project activity require construction, retrofit or other modifications?	VVM	97	Not required.	OK	OK
5.A.e. If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	97	N/A.	OK	OK
5.A.f. Is it a new project activity (project activities with starting date on or after 02 August 2008) or an existing project activity (project activities with a start date before 02 August 2008)?	VVM	98	It is an existing project activity	OK	OK
5.A.g. For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the Executive Board before the project activity start date, had the PP informed the Host Party DNA and/or the UNFCCC secretariat in writing of the commencement of the	VVM	99	Not applicable	OK	OK

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project activity and of their intention to seek CDM status? (Provide reference to such confirmation from Hos Party DNA and/or UNFCCC secretariat).					
5.A.h. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are the following evidences provided:	VVM	100		OK	OK
5.A.h.i. evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project, including, inter alia:	VVM	100	Pending close CL-1 in above 3.O.iv. and CL-4 in above 5.A.	Pending	OK
a. minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM project activity?			See above	OK	OK
5.A.h.ii. reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation, including, inter alia:	VVM	100	Yes.	OK	OK
a. contract with consultants for CDM/PDD/methodology services?	VVM	100	Yes. The signed ERPA including consultancy services with CRM is presented.	OK	OK
b. Emission Reduction Purchase Agreements or other documentation related to the sale of the	VVM	100	Yes.	OK	OK

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potential CERs (including correspondence with multilateral financial institutions or carbon funds)?			ERPA signed with CRM on 25/01/2008		
c. evidence of agreements or negotiations with a DOE for validation services?	VVM	100	Yes. Kept by BV Certification.	OK	OK
d. submission of a new methodology to the CDM Executive Board?	VVM	100	Not applicable		
e. publication in newspaper?	VVM	100	Not applicable		
f. interviews with DNA?	VVM	100	Yes. Bulletin on 53 <sup>rd</sup> Meeting of National CDM Board issued by China's DNA on 22/09/2008 provided. <a href="http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1942.pdf">http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1942.pdf</a>	OK	OK
g. earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	100	Not applicable		
<b>5.B. Identification of alternatives</b>					
5.B.a. Does the approved methodology that is selected by the proposed CDM project activity prescribe the baseline scenario and hence no further analysis is required?	VVM	103	Yes. Refer to 4.D.b. and 5.c.i. above.	OK	OK
5.B.b. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	103	Not applicable		
5.B.c. Does the list of alternatives given in the PDD ensure that:	VVM	104	Yes.	OK	OK



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i. the list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity?	VVM	104	Yes. Refer to 5.c.i. above	OK	OK
ii. the list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity?	VVM	104	Yes. Refer to 5.c.i. above	OK	OK
iii. the alternatives comply with all applicable and enforced legislation?	VVM	104	Yes. Refer to 5.c. above	OK	OK
<b>5.C. Investment analysis</b>					
5.C.a. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	106	Yes.	OK	OK
5.C.b. If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	106			
i. the most economically or financially attractive alternative?	VVM	106	Not applied.		OK
ii. economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	106	Yes. Concluded based on the IRR calculation (5.35% less than the benchmark of 8%) and signed ERPA. The input values from the approved FSR are used.	OK	OK

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5.C.c. Was this shown by one of the following approaches?	VVM	107	Yes.	OK	OK
i. Demonstrate that the proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.	VVM	107	Not applicable.		
ii. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	107	Not applicable.		
iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	107	Yes.	OK	OK
5.C.d. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 41	Ann 45	No. The period of assessment covers the 3x7 crediting period of the Project.	OK	OK
5.C.e. Does the project IRR and equity IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period?	EB 41	Ann 45	Yes. 1 year for construction period and 20 years for operation period per the approved FSR. The operation period of more than 20 years is widely applied in Chinese wind Power Sector. The fair value set as 5% same as the approved FSR.	OK	OK

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5.C.f. Does the IRR calculation include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment?	EB 41	Ann 45	Yes.	OK	OK
5.C.g. Do the project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without reference to the proposed CDM crediting period?	EB 41	Ann 45	Yes. According to the <i>Design code for wind power plants</i> worked out by local authorities the period of assessment is prescribed not less than 20 years. The 20 years used in the PDD is reasonable.	OK	OK
5.C.h. Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 41	Ann 45	5% same as in the approved FSR.	OK	OK
5.C.i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 41	Ann 45	Yes. The FSR with fair value of 5% has been approved by the government in line with the relevant national tax regulation i.e. Guo Shui Han [2005] 883 # <a href="http://www.chinesetax.net/hainan/admin/LAWS/Laws_TextDetail.aspx?LawsId=20284">http://www.chinesetax.net/hainan/admin/LAWS/Laws_TextDetail.aspx?LawsId=20284</a>	OK	OK
5.C.j. Was a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices conducted?	VVM	109	Not clear. 1. A further clarification on the rationale that the total investment of the proposed project is impossible to be decreased by over 10%. 2. The details of the fluctuation range of the historical wind resources are required to be	CL-5  CL-6	OK

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			addressed. 3. The further supporting evidences of the tariff that unlikely to be changed in the life time are required.	CL-7	
5.C.k. Were the parameters cross-checked against third-party or publicly available sources, such as invoices or price indices?	VVM	109	Not presented. Pending close (5.C.j) above	Pending	OK
5.C.l. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	109	The FSR provided has been reviewed	OK	OK
5.C.m. Was the correctness of computations carried out and documented by the project participants assessed?	VVM	109	Yes	OK	OK
5.C.n. Was the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions assessed?	VVM	109	Not analyzed in PDD.	CL-8	OK
5.C.o. To determine this, was it assessed whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark by:	VVM	110	Not analyzed in PDD. See above 5.C.n. CL-9.	Pending	OK
i. assessing previous investment decisions by the project participants involved?	VVM	110	Yes.	OK	OK
ii. determining whether the same benchmark has been applied?	VVM	110	The benchmark of 8% is widely used for wind power projects similar to the Project in China.	OK	OK

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iii. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	110	No other benchmark rate can be applied in China power sector.	OK	OK
5.C.p. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities?	VVM	111	Yes.	OK	OK
5.C.q. If yes: (EB38 para.54)	VVM	111			
a. Has the FSR been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed?	VVM	111	Yes, as interviewed, the PP's final decision to proceed with the investment in the Project was made on 20/12/2007 based on the conclusion of the FSR finalized in Nov.2007.  Validation team was therefore confident that it is unlikely in the context of the underlying project activity that the input values would have materially changed.	OK	OK
b. Are the values used in the PDD and associated annexes fully consistent with the FSR? If not, was the appropriateness of the values validated?	VVM	111	All parameters used in the PDD are fully consistent with the FSR.	OK	OK
c. On the basis of its specific local and sectoral expertise, is confirmation provided, by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the investment decision?	VVM	111	The data source of the tariff mentioned in the FSR is the Notification of electricity tariff for wind power projects in Inner Mongolia Region covered by NCPG issued by NDRC in Jun.2007.  <b>Investment cost</b>	OK	OK

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			<p>Cross-checked with the investment costs per MW of those nearby registered CDM projects with the similar wind power technology in Inner Mongolia. The WTG employed part of domestic technology, as a consequence the unit cost of the Project is found within the reasonable range of the official statistics of wind farms investment./Ref.30/</p> <p>.</p> <p><b>Annual generation</b> Cross-checked with the wind farms in the same region.</p> <p><b>Annual O&amp;M cost</b> Cross-checked with the similar projects with CDM registration in Inner Mongolia region.</p> <p><b>On-grid tariff</b> Cross-checked with the Notifications of electricity tariff for wind power projects in Inner Mongolia Region covered by NCPG, which were issued by NDRC from 2007 to 2008, and found the same value of 0.51 CNY per KWh.</p> <p><b>Tax rate, Fair value, depreciation etc</b> Cross-checked with the relevant tax regulation conducted by State Administration of Taxation. <a href="http://www.chinatax.gov.cn/n8136506/index.html">http://www.chinatax.gov.cn/n8136506/index.html</a></p>		

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<b>5.D. Barrier analysis</b>					
5.D.a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	113	Not applied in the PDD.	OK	OK
<b>5.E. Common practice analysis</b>					
5.E.a. Is this a large-scale, or first-of-its kind small-scale project activity?	VVM	117	a large-scale	OK	OK
5.E.b. If yes, was common practice analysis carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM	117	Yes.	OK	OK
5.E.c. Was it assessed whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type? (For certain technologies the relevant region for assessment will be local and for others it may be transnational/global.	VVM	118	Yes. Refer to 5.t. above.	OK	OK
5.E.d. Was a region other than the entire host country chosen?	VVM	118	Yes. Inner Mongolia Autonomous Region	OK	OK
5.E.e. If yes, was the explanation why this region is more appropriate assessed?	VVM	118	Not addressed.	CL-9	OK
5.E.f. Using official sources and local and industry expertise, was it determined <b>to what extent</b> similar	VVM	118	Only two similar projects as PDD listed can be identified in Inner Mongolia Autonomous Region.	OK	OK



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
and operational projects (e.g., using similar technology or practice), other than CDM project activities, have been undertaken in the defined region?					
5.E.g. Are similar and operational projects, other than CDM project activities, already "widely observed and commonly carried out" in the defined region?	VVM	118	Not found through this analysis.  The national debt found or foreign investment is identified to be the essential distinctions to the proposed project.	OK	OK
5.E.h. If yes, was it assessed whether there are essential distinctions between the proposed CDM project activity and the other similar activities?	VVM	118	Not applicable.	OK	OK
<b>6. Monitoring plan</b>					
6.a. Does the PDD include a monitoring plan?	VVM	120	Yes.	OK	OK
6.b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	120	Yes.	OK	OK
6.c. Were the list of parameters required by the the selected methodology identified?	VVM	121	Yes.	OK	OK
6.d. Does the monitoring plan contains all necessary parameters?	VVM	121	Yes.  Only EGy is required.	OK	OK
6.e. Are the parameters clearly described?	VVM	121	Yes  EGy is the net electricity supplied to the grid.	OK	OK
6.f. Does the means of monitoring described in the plan comply with the requirements of the	VVM	121	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
methodology?					
6.g. Specific questions per methodology ACM0002 version 09 regarding parameters.			Yes. Hourly measurement and monthly recording Commercial receipts will be kept for cross-check	OK	OK
6.h. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	121	Yes. In line with local practices in power sector	OK	OK
6.i. Are the following means of implementation of the monitoring plan sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified:	VVM	121	Yes.	OK	OK
i. data management procedures?	VVM	121	Yes. The procedures are appropriate and practicable.	OK	OK
ii. quality assurance procedures?	VVM	121	Yes. The procedures are appropriate and practicable.	OK	OK
iii. quality control procedures?	VVM	121	Yes. The procedures are appropriate and practicable.	OK	OK
<b>7. Sustainable development</b>					
7.a. Does the CDM project activity assist Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	123	Pending close out above CAR-1,CAR-2	Pending	OK
7.b. Does the letter of approval by the DNA of the	VVM	124	Pending close out above CAR-1,CAR-2	Pending	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party?					
<b>8. Local stakeholder consultation</b>					
8.a. Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity) <b>invited</b> by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?	VVM	126	Yes.  The local stakeholders including local villagers, officers of EPA were invited by the PP in Feb. 2008;  40 pieces of questionnaires were distributed and 40 amonth them were requred.	OK	OK
8.b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	127	Yes.  The potential impacts including noise, waste water and electromagnetic interference were considered seriously.	OK	OK
8.c. Is the summary of the comments received as provided in the PDD complete?	VVM	127	Yes.  Sampled questionnaires have been cross-checked with the description in the PDD -E.7.2.	OK	OK
8.d. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	127	Yes.  PDD - E.7.3. There will be no significant negative impacts after specific measures taken as the conclusion of the approved EIA.	OK	OK
<b>9. Environmental impacts</b>					
9.a. Have the project participants submitted	VVM	129	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl.	Final Concl.
documentation on the analysis of the environmental impacts of the project activity?			EIA and its approval made by local EPA are presented.		
9.b. Have the project participants undertaken an analysis of environmental impacts?	VVM	130	Yes. EIA worked out by Inner Mongolia Power Exploration and Design Institute on 7 Nov.2007.	OK	OK
9.c. Does the host Party require an environmental impact assessment?	VVM	130	Yes.	OK	OK
9.d. If yes, have the environmental impact assessment approved by local government?	VVM	130	Yes. Approved by Inner Mongolia Environmental Protection Bureau on 5 May.2008.	OK	OK

**Table 2 Resolution of Corrective Action and Clarification Requests**

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
<b>CAR-1</b> Please provide LoA from DNA of China	Table1. 1.A.	The LoA from DNA of China was obtained in Nov 2008 and provided to DOE.	The LoA is verified substantial. Hence the CAR is closed.
<b>CAR-2</b> Please provide LoA from DNA of United Kingdom.	Table1. 1.A.	The LoA from DNA of United Kingdom of Great Britain and Northern Ireland was issued on 24/02/2009 and presented.	The LoA is verified substantial. Hence the CAR is closed.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
<b>CAR-3</b> The capacity and WTG model of the Project stated in the PDD for public comments was changed to 1.25MW with total capacity of 50 MW. Please address the discrepancy.	Table 1. 3.D.i	<p>According to the comparison of the two options of turbine selection in the approved FSR, the total investment of 50MW (40x1.25MW) is lower than 49.5MW (33x1.5MW) by 0.4%, while, the annual output of 50MW option is lower than 49.5MW by 3.2%, consequently, as the conclusion of the FSR, the IRR of 50MW option is 5.35% which is lower than the 5.50% of IRR of 49.5MW option as indicated in the PDD version 1.1 made public available.</p> <p>As a result of supply shortage afterwards, the PP had to change the turbine models to 1.25MWx40 sets as Option II designed in the FSR.</p> <p>Therefore, to reflect the real situation, the input values for financial analysis in the PDD version 2 are taken from the parameters of 50MW option defined in the FSR.</p>	<p>The changes in WTG model due to the supply restriction is indeed the case in China wind power sector, which is no need to be re-approved by local or national government. The financial indicators of the Option II are thus adopted for investment analysis in updated PDD.</p> <p>In addition, the two WTG models in the signed contracts have been verified by BVC and found the consistence with the options defined in the FSR.</p> <p>The Option II's value can be considered more reliable for investment analysis. Hence the CAR is closed.</p>
<b>CAR-4</b> The web link of the grid data issued by China's DNA indicated in PDD is not correct. Please correct.	Table 1. 3.E.g.ii.	The web link has been revised in the revised PDD B.6.	The revised web link can be replicated. Hence the CAR is closed.
<b>CL-1</b>	Table 1	The PP's formal investment decision in CDM	The evidences are verified to be

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
The evidences of PP's formal investment decision in CDM development is required to be presented.	3.O.iv.	development dated 20/12/2007 is provided to BVC.	substantial. Hence the CL is closed.
<b>CL-2</b> In PDD Section B.6. As mentioned in the step 3 of "Tool to calculate the emission factor for an electricity system", option C should only be used if only nuclear and renewable power generation are considered as low-cost/must-run power sources and if the quantity of electricity supplied to the grid by these sources is known. However, PDD is silent about it. Please address it in more detail.	Table 1 4.E.g.	Revised in the PDD ver.2.	The definition is verified to be appropriate. Hence the CL is closed.
<b>CL-3</b> In Common Practice, the criteria of project scale is defined to be between 30MW to 60MW ; Please justify the rationale accordingly.	Table 1 5.t.	The more appropriate range i.e. above 15MW has been revised in the revised PDD.	The revision has been checked and found appropriate. Hence the CL is closed.
<b>CL-4</b> Please present the contract of construction signed with the contractor.	Table 1 5.A.b.	The contract signed in September 2008 has been provided.	The data sources provided is verified to be substantial. Hence the CL is closed.
<b>CL-5</b>	Table 1	For the wind farm projects, the costs mainly	The evidences provided are verified to

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
A further clarification on the rationale that the total investment of the proposed project is impossible to be decreased by over 10%.	5.C.j.	include turbines, engineering construction and related accessories. As prices of the raw materials are increasing in recent years, the total investment is impossible to reduce by 10%. A detailed description has been presented in the revised PDD.	be reasonable and the value used can be confirmed conservative. Hence the CL is closed.
<b>CL-6</b> The details of the fluctuation range of the historical wind resources are required to be addressed.	Table 1 5.C.j.	The annual electricity output in the FSR is estimated by Inner Mongolia Power Exploration & Design Institute and based on the reliable data of 30-year (1977-2006) wind data of local meteorological stations. Therefore, the electricity generation is impossible to increase by 10%.The evidence is provided to DOE.	The answers are verified to be consistent with the statement in the FSR page 2-3. Hence the variation range of the indicator is considered enough and the CL is closed
<b>CL-7</b> The further supporting evidences of the tariff that unlikely to be changed in the life time are required.	Table 1 5.C.j.	According to the tariff document issued by NDRC on 09/06/2007 ( Fa Gai Jia Ge [2007] 1260) , the government guiding tariff for wind farm projects in western Inner Mongolia is 0.51 Yuan/kWh, which is also the referenced tariff in the FSR. As mentioned in the government document issued on 03/12/2007 ( Fa Gai Jia Ge [2007] No. 3303), 0.51 Yuan/kWh will be fixed in the first 30,000 hours, while the average tariff of the local coal power plant will be used after the 30,000 hours, currently is 0.26276 Yuan/kWh, which	The answers with supporting evidences provided are verified to be reasonable and the tariff value of 0.51 used in the PDD after the equivalent generation period of 30,000 hours can thus be confirmed conservative. Hence the CL is closed.



## VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
		<p>is 48% lower than the guiding tariff.</p> <p>To be conservative, the tariff in the FSR, PDD and IRR calculation are 0.51 Yuan/kWh (incl. VAT) for financial assessment during the whole 20-year operation period. Therefore, applying the on grid tariff to be 0.51 Yuan/kWh for the whole project lifetime is conservative.</p>	
<b>CL-8</b> Please determine that under what conditions variations for the sensitivity analysis would reach the benchmark 8%, and also elaborate the likelihood of these conditions?	Table 1 5.C.n.	The critical points of the four key financial indicators have been supplemented in the revised PDD.	<p>The answers are verified to be reasonable and properly reflecting the real situation of the host country.</p> <p>Hence the CL is closed.</p>
<b>CL-9</b> Please further elaborate that why Inner Mongolia Autonomous region is more appropriate for common practice analysis?	Table 1 6.E.e.	Inner Mongolia Autonomous Region is large enough for analysis as it is the largest region of wind resources in China.	<p>The answers are verified to be reasonable and properly reflecting the real situation of Chinese wind resources.</p> <p>Hence the CL is closed.</p>